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MAN AND HIS ENVIRONMENT

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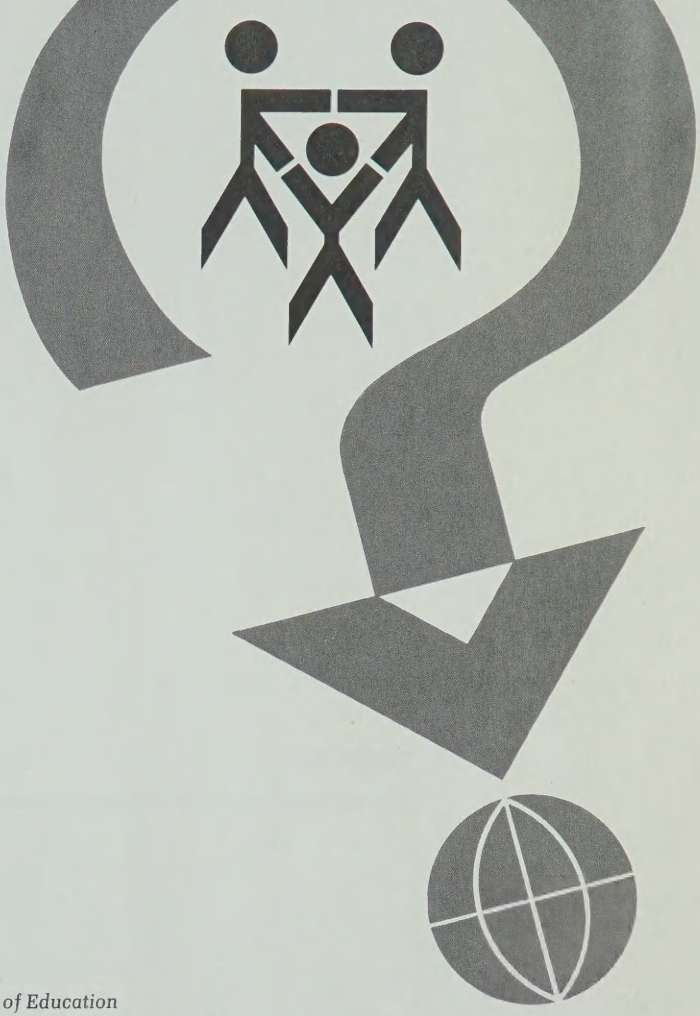

MAN AND HIS ENVIRONMENT

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INTRODUCTION

Man and His Environment

This unit should help you understand the relationship between man's culture and his physical surroundings—the environment. You will be particularly concerned with how, together, they determine where people live and work. A culture is the way of life of a particular group of people. It includes the ideas, tools, values, and practices common to the group.

Exercise 1 will introduce you to such aspects of the environment as landforms, vegetation, and climate. You will be asked to apply what you learned in this exercise to those that follow. The exercises emphasize such questions as: (1) Why do people choose to settle in one place rather than another? (2) Why do people move from one place to another? (3) Which is more important in influencing how wealthy a country will become—culture or environment? (4) How do countries decide where their borders will be?

In your study of why people may choose to settle in one place rather than in another, you will examine a variety of materials, including maps, slides, and tables. *Man and His Environment* also includes several games, or puzzles. These puzzles will introduce you to the various factors a society must consider in choosing a location for settlement. Several lessons are concerned with value questions. That is, you are to decide what *ought* to be done in a certain case.

Throughout this unit, you are expected to analyze the data provided and develop your own interpretations about what you find. There are no right and wrong answers. Your answers will be graded on the basis of the evidence you use to support them. Often the information you are given is not complete. In such instances you should look for other sources of information to make your explanations more satisfactory.

EXERCISE 1

Man and His Environment:

Examining the Natural Environment

In Exercise 1 you will examine various kinds of environments, or habitats, by studying slides, maps, and graphs. As you work with these materials, you should become familiar with different types of climate, vegetation, and landforms. What parts of the world have similar climates? Different climates? In what parts of the earth is the climate most extreme? Where is there little rain? Heavy rainfall? What are the various kinds of vegetation? Where are they found? What parts of the world are mountainous? Flat? Hilly? What can you learn about the climate, landforms, and vegetation of your own city or county? Try to answer these questions and others like them as you analyze the data provided in this exercise.

ANALYZING SLIDES OF HABITATS

Ideas to Consider

This lesson includes ten slides of different environments, or habitats. Study each slide carefully and try to answer these questions:

1. From this slide, what can you tell about the climate, landform, and vegetation of the area?
2. What way or ways of life seem likely to develop in this kind of environment? Explain your answers.
3. In what parts of the world is this environment most likely to be found?

After you have examined all the slides, consider these questions:

1. Which habitats seem to be most alike? Which differ most? Explain your answers.
2. In which of the places shown would you like to live? In which would you not want to live? Why?

ANALYZING WORLD MAPS

Natural Vegetation

1. Which areas on the vegetation map correspond to the environments shown in the slides? Give reasons for your answers.
2. Where are the major desert regions? Forest areas? Grasslands?
3. Are the various kinds of vegetation evenly distributed on all the continents? Can you find a pattern to their distribution? If so, point it out to the class. Which types of vegetation are more widespread than others?
4. Which areas would be most useful for human settlement? Least useful? Support your answers with reasons.
5. Estimate roughly the proportion that exists between useful and useless areas of the world. How do you define useful areas? Useless areas?

Landforms

1. What symbols are used on the map to indicate landforms? How is land elevation measured? What do the different height classifications mean? What does "sea level" mean? "Below sea level"?
2. Where are the main mountainous areas of the world?
3. Where are the great lowland areas?
4. Where are the largest and longest rivers?
5. Can you find a pattern in the distribution of lowlands and mountains? Explain your answer.
6. On the basis of topography (or landforms), which areas would be most desirable for human life? Least desirable? Give reasons for your answers.

Annual Rainfall and January-July Temperatures

1. How is rainfall distributed throughout the world? Which areas of the world receive the most rainfall? The least rainfall?
2. How do temperatures vary in the world? What changes in temperatures occur as one goes farther and farther north? Farther and farther south? As one approaches the equator?
3. In comparing the Northern and Southern hemispheres, what do you observe about the seasons?
4. On the basis of temperature and rainfall, which areas would be most desirable for settlement? Least desirable? Give reasons for your answers.

NATURAL VEGETATION OF THE WORLD

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LANDFORMS OF THE WORLD
Mountains
Highlands and plateaus
Lowlands and plains
NORTH AMERICA
SOUTH AMERICA
EUROPE
ASIA
AFRICA
AUSTRALIA
NEW ZEALAND
ANTARCTICA
ARCTIC OCEAN
ATLANTIC OCEAN
PACIFIC OCEAN
INDIAN OCEAN
NORTH POLE
SOUTH POLE
EQUATOR
TROPIC OF CANCER
TROPIC OF CAPRICORN
ANTARCTIC CIRCLE
ARCTIC CIRCLE
PRIME MERIDIAN
GREENLAND
ICELAND
SAHARA
ARABIAN SEA
BAY OF BENGAL
MEDITERRANEAN SEA
GULF OF MEXICO
CARIBBEAN SEA
HAWAIIAN IS.
MADAGASCAR
PHILIPPINES
JAPAN
NEW GUINEA
TASMANIA
WEDDELL SEA
ROSS SEA
QUEEN MAUD LAND
WILKES LAND
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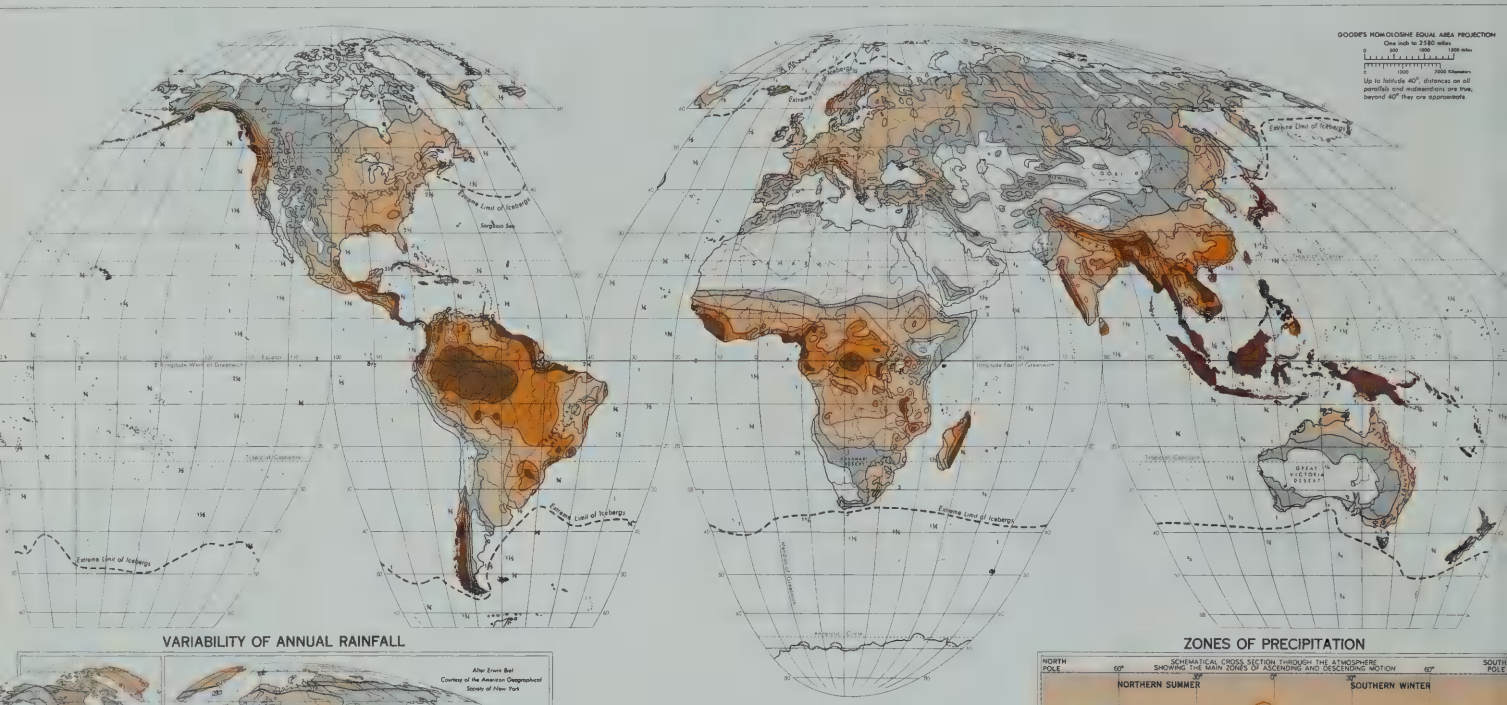
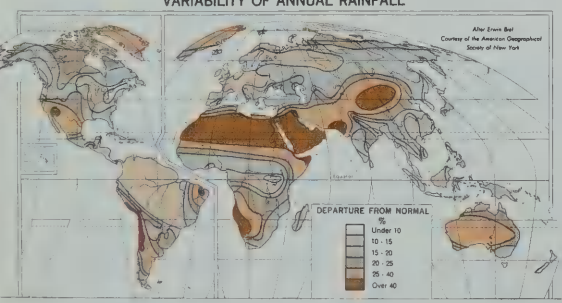
WORLD • ANNUAL RAINFALL


GOODE'S HOMOLOSINE EQUAL AREA PROJECTION
One inch to 2580 miles
Up to latitude 40°, distances on all parallels and meridians are true; beyond 40° they are approximate
Extreme Limit of Icebergs
Sargasso Sea
Equator
Tropic of Capricorn
Tropic of Cancer
Greenwich
GREAT VICTORIA DESERT

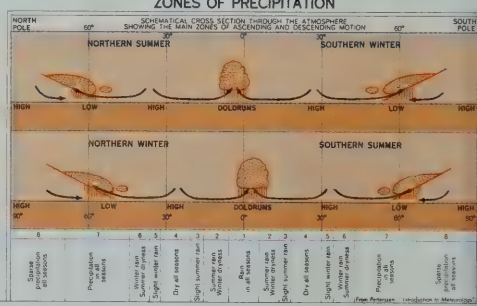
VARIABILITY OF ANNUAL RAINFALL

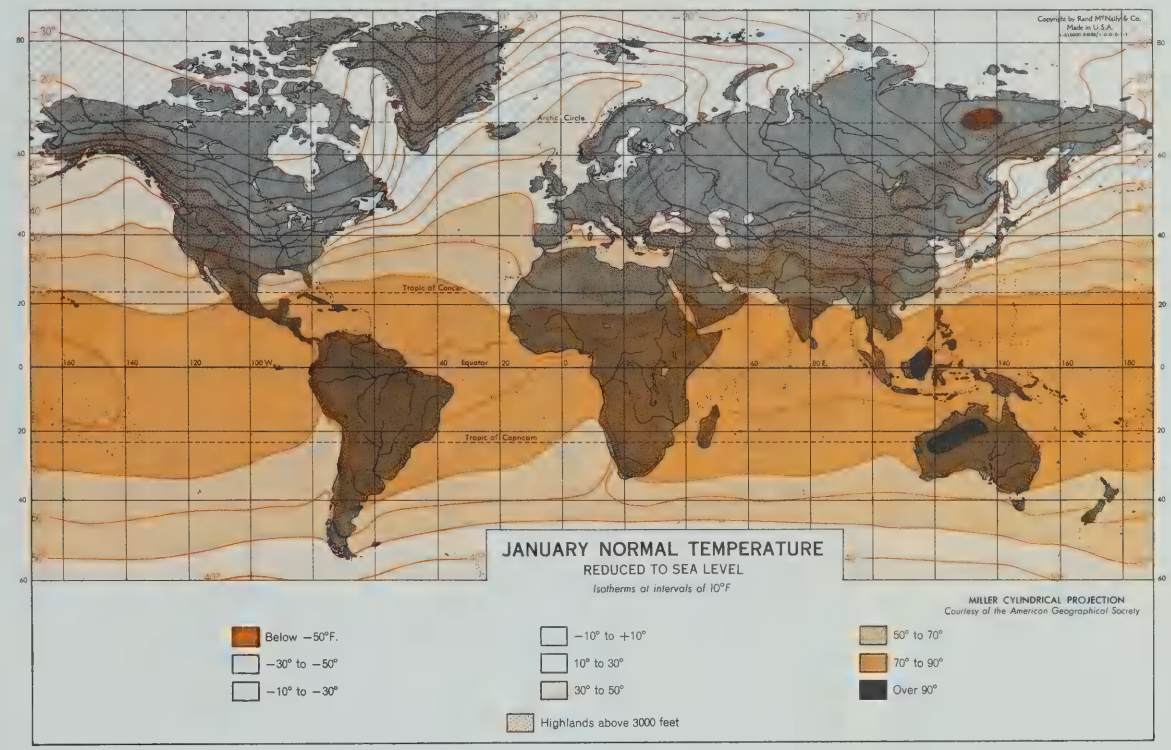


ANNUAL RAINFALL

Centimeters	Inches
Under 25	Under 10
25 - 50	10 - 20
50 - 100	20 - 40
100 - 150	40 - 60
150 - 200	60 - 80
Over 200	Over 80

ZONES OF PRECIPITATION

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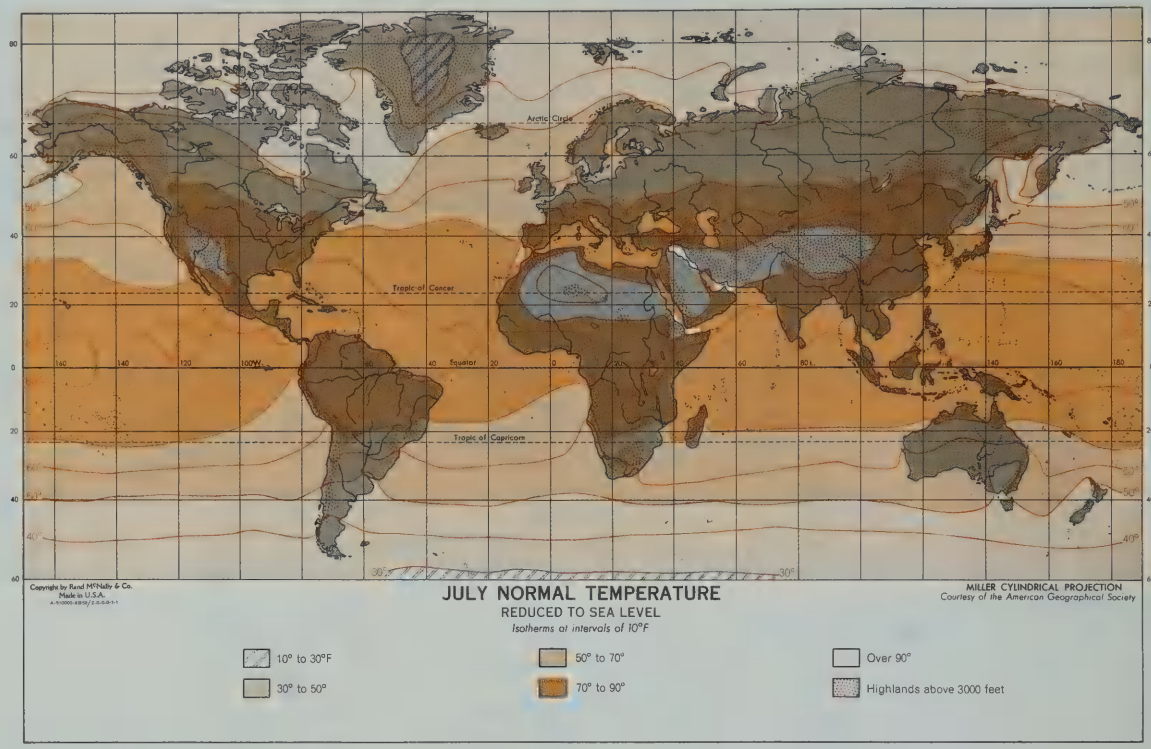
Arctic Circle
Tropic of Cancer
Equator
Tropic of Capricorn
JANUARY NORMAL TEMPERATURE
REDUCED TO SEA LEVEL
Isotherms at intervals of 10°F
MILLER CYLINDRICAL PROJECTION
Courtesy of the American Geographical Society
Below −50°F.
−30° to −50°
−10° to −30°
−10° to +10°
10° to 30°
30° to 50°
50° to 70°
70° to 90°
Over 90°
Highlands above 3000 feet


Arctic Circle
Tropic of Cancer
Equator
Tropic of Capricorn
160
140
120
100W
80
40
20
0
20
40
60
80
100
120
140
160
180
80
60
40
20
0
20
40
60
50°
40°
30°
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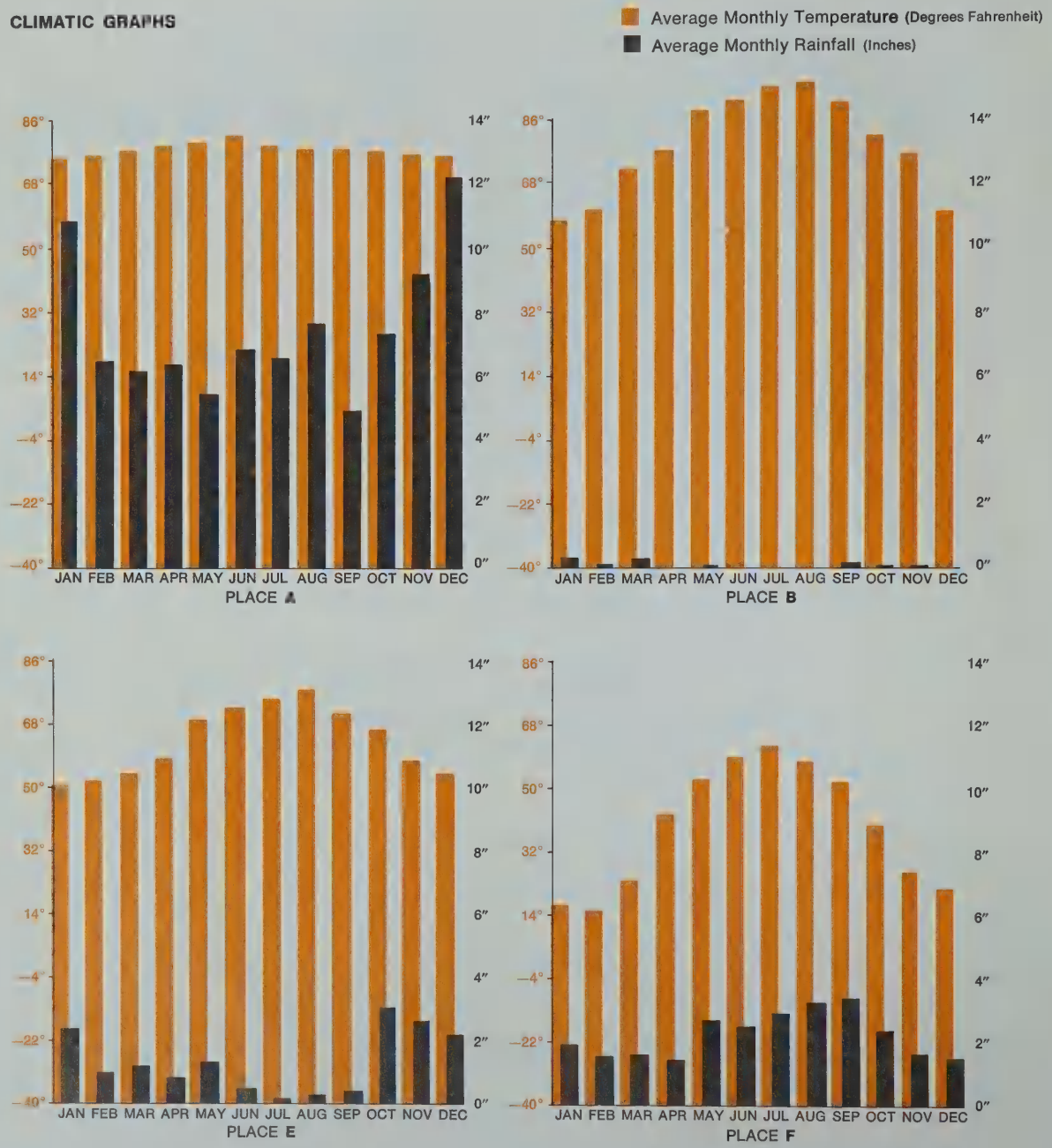
JULY NORMAL TEMPERATURE
REDUCED TO SEA LEVEL
Isotherms at intervals of 10°F
MILLER CYLINDRICAL PROJECTION
Courtesy of the American Geographical Society
10° to 30°F
30° to 50°
50° to 70°
70° to 90°
Over 90°
Highlands above 3000 feet

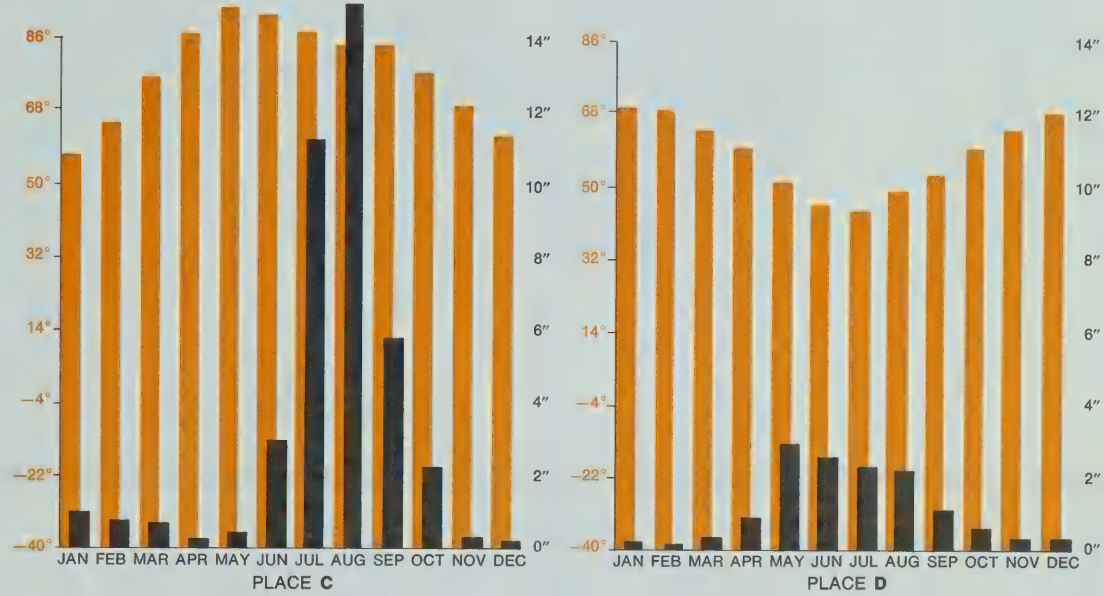
ANALYZING CLIMATIC GRAPHS

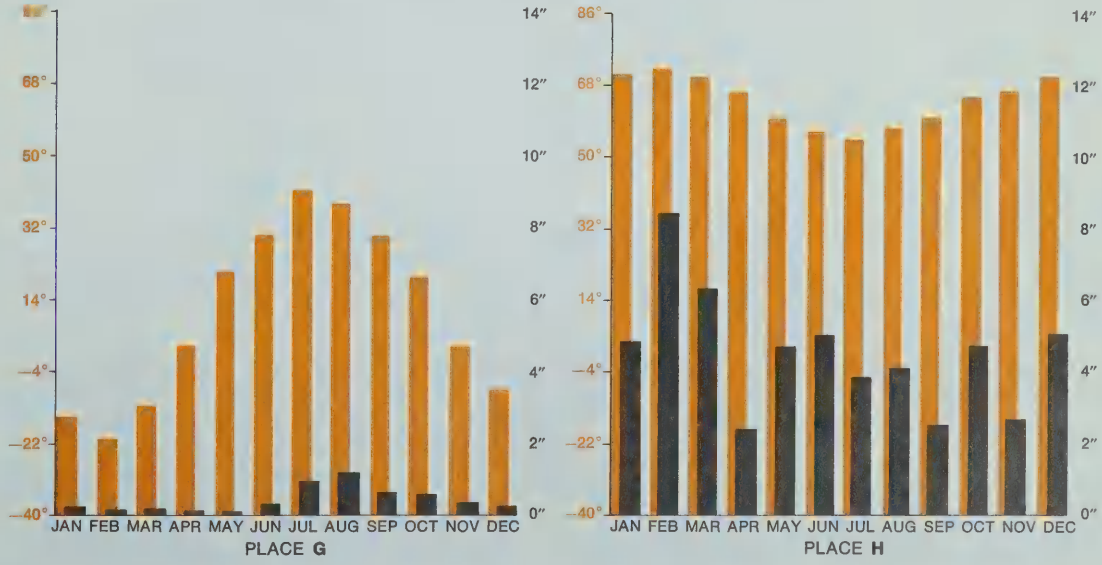
Ideas to Consider

1. What can you learn about each city from these graphs?
2. What kind of climate does each graph represent?
3. In what way are the climates represented by the graphs similar? Different?
4. What are the probable locations of the climates indicated? Why?
5. Which graphs would come closest to representing habitats shown in the slides? Why?
6. How would a climatic graph of your town look? Can you draw one? What do you need to know in order to make one?

CLIMATIC GRAPHS




86°
68°
50°
32°
14°
−4°
−22°
−40°
14″
12″
10″
8″
6″
4″
2″
0″
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
PLACE C
PLACE D


86°
68°
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−22°
−40°
14″
12″
10″
8″
6″
4″
2″
0″
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
PLACE G
PLACE H

General Questions

1. In this exercise you have examined data concerning landforms, vegetation, rainfall, temperature, and climate. What combination of these elements would seem to provide the most favorable conditions for human settlement and social development? The least favorable conditions? Explain your answers.
2. Where have people established a reasonably comfortable existence in a seemingly undesirable place? Why have they settled there?
3. If you had a choice, in which area of the world would you like to live? Give reasons for your choice.

EXERCISE 2

Man and His Environment: *Comparing Five Islands*

In this exercise you will be asked to decide how the physical environment influences technological development. Does man develop his technology to a greater degree in some areas than in others?

You will be given data concerning five different islands. From this information you will be asked to (1) decide what ways of life are most likely to exist on each island, and (2) rank each island according to its wealth.

You are to work out a solution to this problem with several of your classmates. Answers will be judged by how well they are supported with evidence. After your group has reached its decision, compare ideas with other groups in your class.

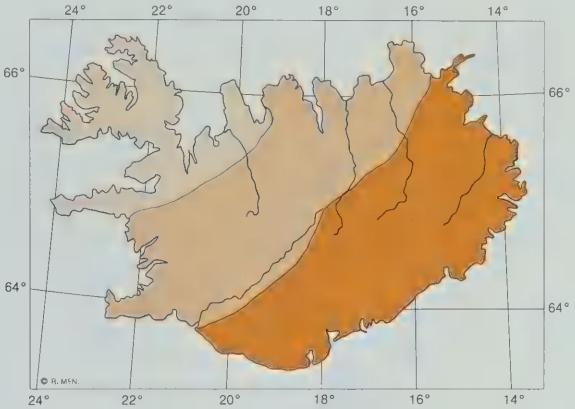
MAP GAME—FIVE ISLANDS

Directions

Study the maps and other information concerning five islands: *A, B, C, D,* and *E.* Then try to answer these questions:

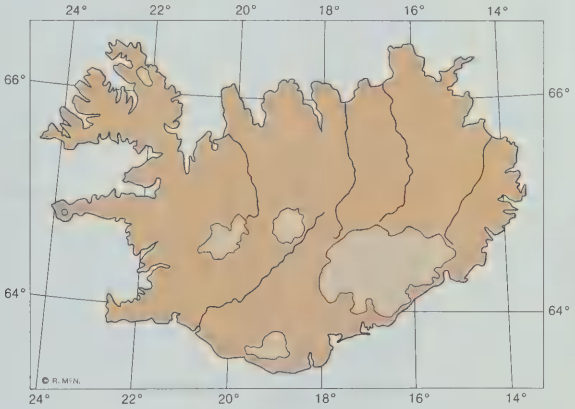
1. What kinds of living conditions are likely to be found on each island?
2. Where do you think each island is located? How can you tell? How can you tell whether each island is north or south of the equator?
3. Assume that people are living on all the islands. Can you decide what way of life—what kind of economy—will be followed on each island? Give reasons for your answer. Where, then, will people on each island be most likely to live? Where are cities most likely to develop? Indicate these places on outline maps.
4. Using the evidence in this exercise, rank the five islands according to which you think have the highest and lowest standards of living. Do you have enough information to enable you to decide? If not, what additional information do you need in order to decide which island has the highest standard of living? The lowest? Give reasons or explanations for all your statements.

ISLAND **A**



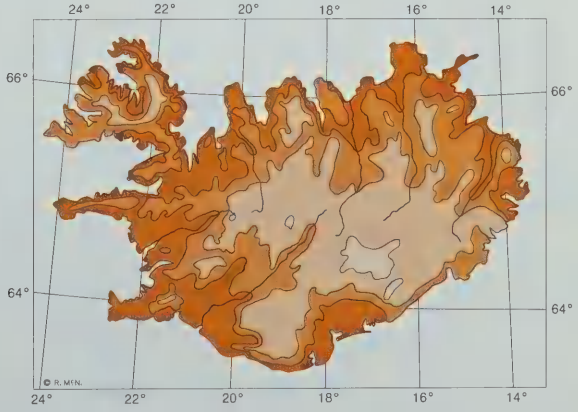
ANNUAL RAINFALL
- 10-20 inches
- 20-40 inches
- 40-60 inches
- 60-80 inches

0 30 Miles



VEGETATION
- Little or no vegetation
- Tundra
- Broadleaf evergreen shrubs, plants
- Broadleaf evergreen trees

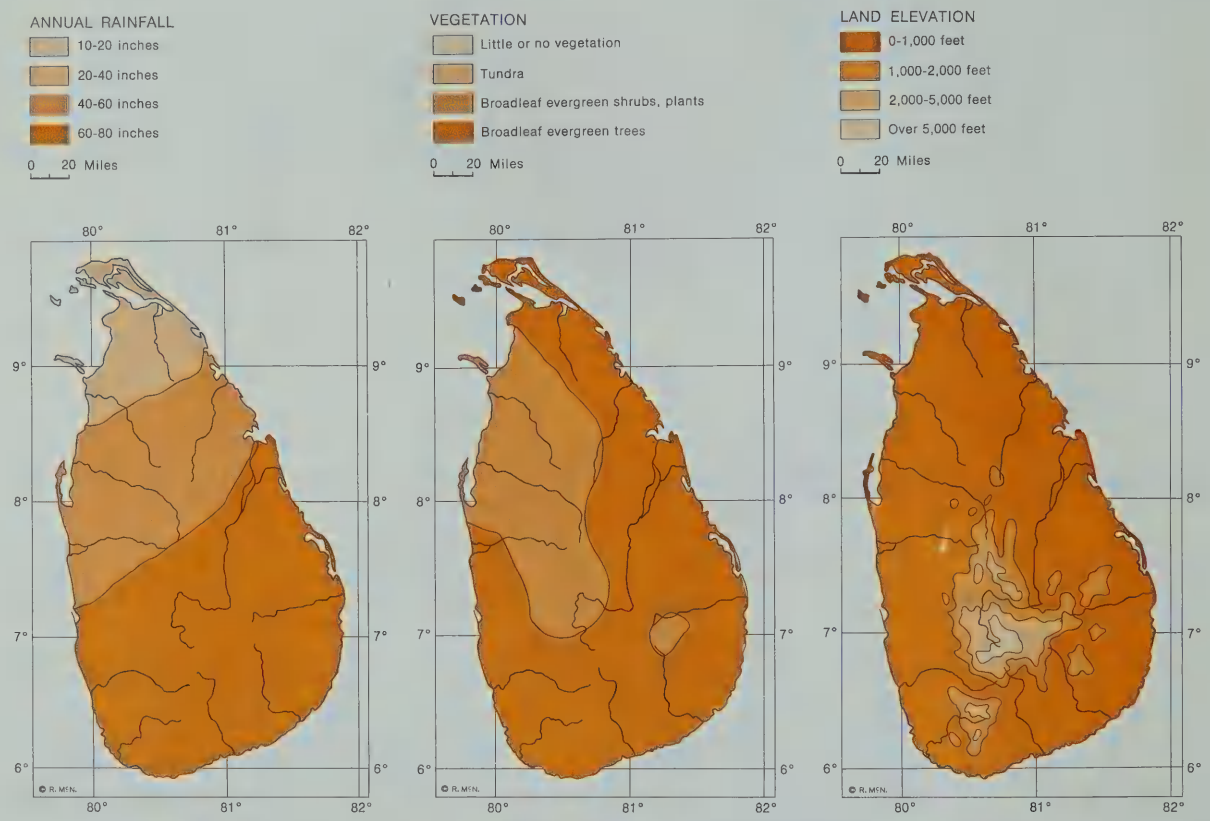
0 30 Miles



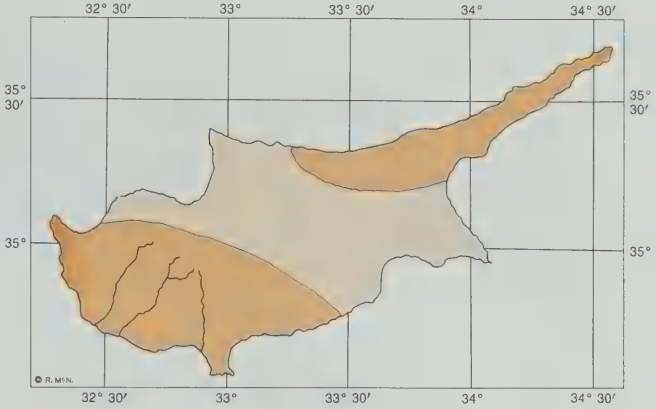
LAND ELEVATION
- 0-1,000 feet
- 1,000-2,000 feet
- 2,000-5,000 feet
- Over 5,000 feet

0 30 Miles

ISLAND **B**

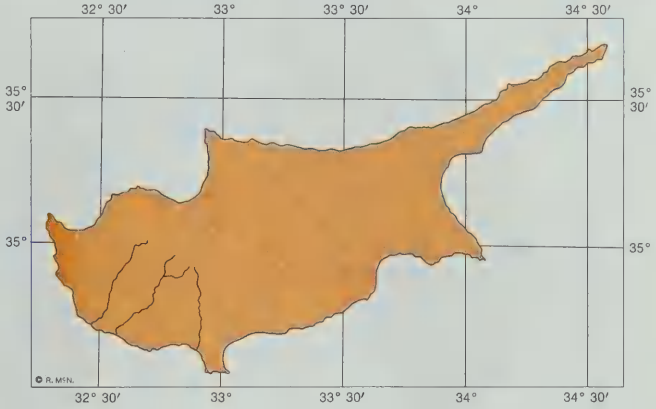

ANNUAL RAINFALL
10-20 inches
20-40 inches
40-60 inches
60-80 inches
0 20 Miles
VEGETATION
Little or no vegetation
Tundra
Broadleaf evergreen shrubs, plants
Broadleaf evergreen trees
0 20 Miles
LAND ELEVATION
0-1,000 feet
1,000-2,000 feet
2,000-5,000 feet
Over 5,000 feet
0 20 Miles
80°
81°
82°
9°
8°
7°
6°
© R. M&N.

ISLAND C



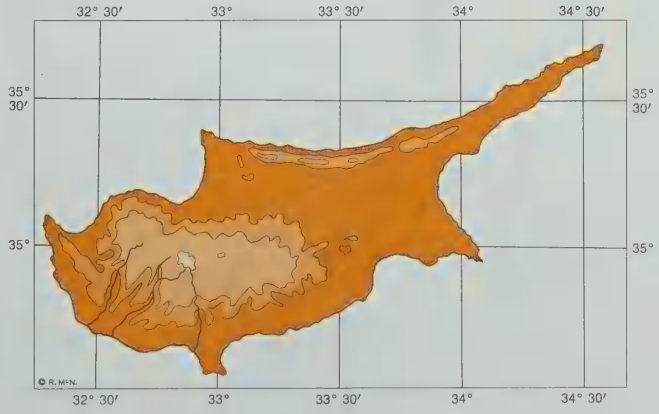
ANNUAL RAINFALL
- 10-20 inches
- 20-40 inches
- 40-60 inches
- 60-80 inches

0 20 Miles



VEGETATION
- Little or no vegetation
- Tundra
- Broadleaf evergreen shrubs, plants
- Broadleaf evergreen trees

0 20 Miles



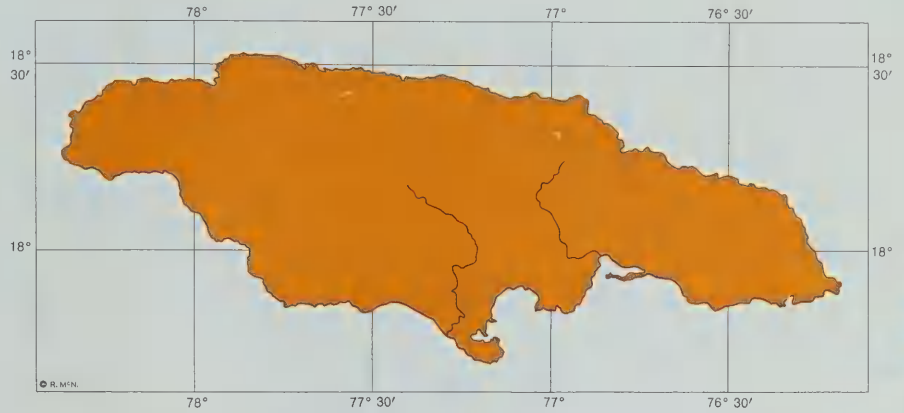
LAND ELEVATION
- 0-1,000 feet
- 1,000-2,000 feet
- 2,000-5,000 feet
- Over 5,000 feet

0 20 Miles

ISLAND D

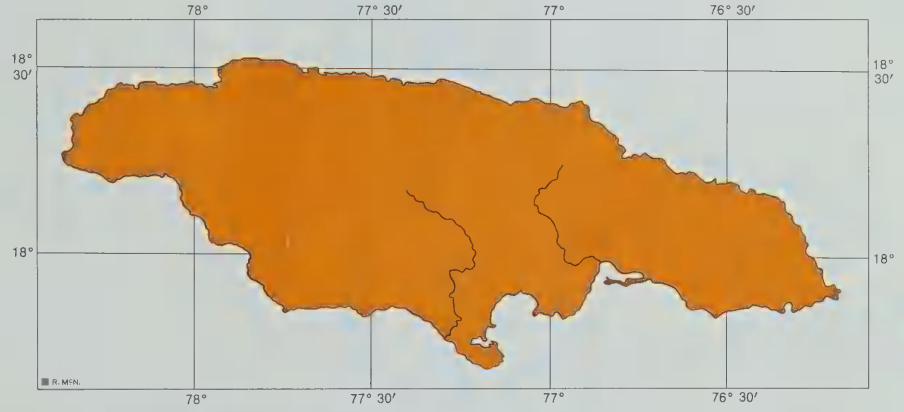
ANNUAL RAINFALL
10-20 inches
20-40 inches
40-60 inches
60-80 inches
0 20 Miles
VEGETATION
Little or no vegetation
Tundra
Broadleaf evergreen shrubs, plants
Broadleaf evergreen trees
0 20 Miles
LAND ELEVATION
0-1,000 feet
1,000-2,000 feet
2,000-5,000 feet
Over 5,000 feet
0 20 Miles
120°
121°
122°
25°
24°
23°
22°
© R.M.N.

ISLAND **E**



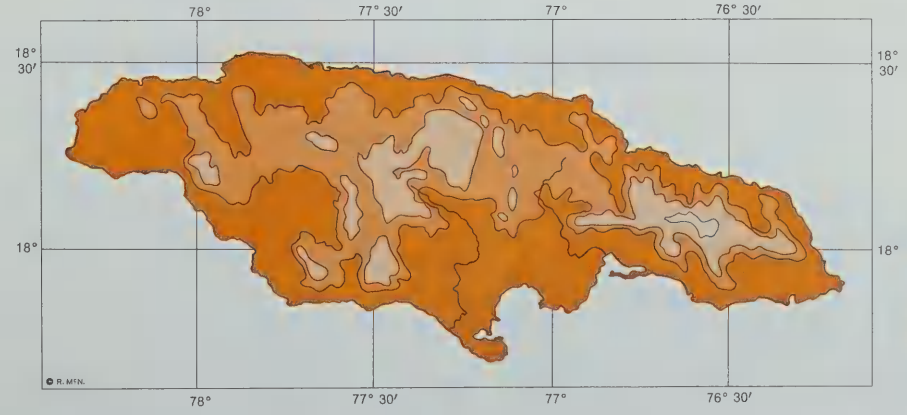
ANNUAL RAINFALL
- 10-20 inches
- 20-40 inches
- 40-60 inches
- 60-80 inches

0 10 Miles



VEGETATION
- Little or no vegetation
- Tundra
- Broadleaf evergreen shrubs, plants
- Broadleaf evergreen trees

0 10 Miles



LAND ELEVATION
- 0-1,000 feet
- 1,000-2,000 feet
- 2,000-5,000 feet
- Over 5,000 feet

0 10 Miles

FACTS ABOUT THE FIVE ISLANDS

	Population	*Government*	*Literacy Rate**	*Resources*	*Temperature Ranges (Averages)*
Island A	190,000	republic	95%	calcium carbonate diatomite	January: 10–30° Fahrenheit (average for the month, approximately 20°; day and night averaged together) July: 50–70° Fahrenheit (average for the month, approximately 60°; day and night averaged together)
Island B	11,000,000	republic	50–60	graphite sapphire ruby	January: 80–85° Fahrenheit† July: 80–85° Fahrenheit†
Island C	590,000	republic	70–90	asbestos copper iron	January: 40–55° Fahrenheit July: 72–85° Fahrenheit
Island D	12,250,000	republic	50–70	coal petroleum marble salt	January: 60–65° Fahrenheit July: 80–85° Fahrenheit
Island E	1,750,000	republic	70–90	bauxite gypsum lead salt	January: 70–80° Fahrenheit (day and night averaged together) July: 80–90° Fahrenheit (day and night averaged together)

* Percent of population ten years of age and over with the ability to read and write.
† Temperature is 40–45° in the mountains.

EXERCISE 3

Man and His Environment:

Determining Where People Settle

In Exercise 3 you will consider why a location may seem more attractive or desirable to some people than to others. As you analyze the maps, photographs, and documents in this exercise, decide (1) how the natural environment affected where a people located their homes, farms, industries, and cities, and (2) how such cultural factors as their beliefs, values, and technical skills affected their use of the environment. You will also be asked to decide from a set of maps where certain groups of people are most likely to choose to live and work. You should support your ideas with facts.

MAP GAME—MYSTERYLAND

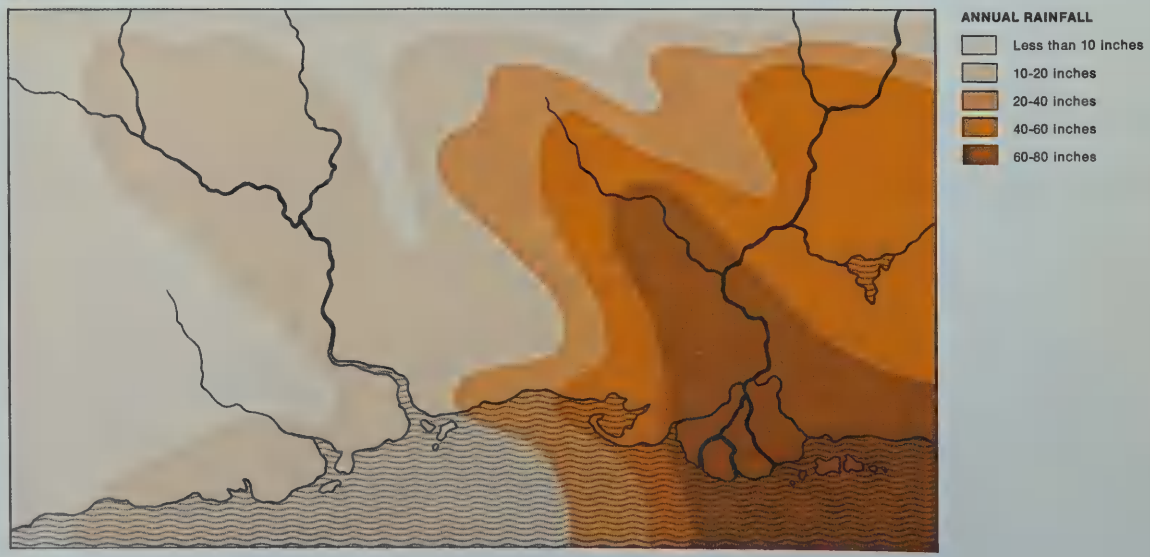
Directions

Examine the four maps of Mysteryland included in this lesson—showing natural vegetation, landforms, climate, and natural resources—and use them to answer the following questions:

1. Where would you locate the three largest cities in Mysteryland? Which would be the largest city in the area? Give reasons for all your answers. Locate your choices on an outline map.
2. How would population be distributed across the area? (That is, where would the most people live? Where would the fewest people live?) On the outline map show what you think the population distribution would be in this area. Give reasons for your opinions.
3. Indicate on the outline map the regions best suited to hunting and gathering, herding, farming, mining, and manufacturing. Give reasons for your choices.
4. Which way of earning a living would be most important to people living in this area? Why?
5. How would you define a desirable location for settlement if you were: A hunter? A herder? A farmer? A miner? A manufacturer? In what ways are your definitions similar? Different? Why?

MYSTERYLAND

MYSTERYLAND



MYSTERYLAND

VEGETATION

- Little or no vegetation
- Broadleaf deciduous trees
- Broadleaf evergreen trees
- Marshes and swamps
- Grasslands
- Needleleaf evergreen trees, shrubs
- Desert plants, shrubs, grasses

MYSTERYLAND

LAND ELEVATION

- Sea level to 1,000 feet
- 1,000 to 3,000 feet (Hilly)
- 3,000 to 6,000 feet
- 6,000 to 10,000 feet

Document 1

1. What things seem to have contributed to the growth of each of the civilizations described in the document?
2. What relationships can you find between a particular people's physical environment, level of technology, and social organization?
3. How would you explain the rise of civilizations? What evidence can you find in this document to support your ideas?

For the purposes of this reading, civilization is defined as that level of development at which a society forms its own government, a system of writing, and an economic organization based upon some form of agriculture. Some of the oldest civilizations known to archaeologists date back to about 4000 B.C. and include the following:

1. *Egyptian civilization.* An Egyptian civilization—one of the earliest in the world—developed around 4000 B.C. along the banks of the Nile River. The Nile, which originates in Uganda, flows through a long, narrow valley to the Mediterranean Sea. Silt carried by the river to lower Egypt was deposited at the Nile Delta once a year at the time the river overflowed.

Most important cities and temples in ancient Egypt were located very close to the Nile. In addition to providing water for irrigation and soil for the rich farmland, the river served as a major transportation route. Great monuments such as pyramids and other tombs remain as an indication of the level reached by this early Egyptian civilization.

2. *Sumerian civilization.* About 4000 B.C. a group of people we call Sumerians settled in the land between the Tigris and Euphrates rivers, known as Mesopotamia. (Today this land is part of Iraq.) The Sumerians were among the first to build canals to control floods and manage water for irrigation purposes. They built cities in and around the delta region where the Tigris and Euphrates flow into the Persian Gulf.

A great deal is known about the Sumerians' civilization through the clay tablets on which they wrote. Their form of writing, known as *cuneiform,* was adopted by peoples of later civilizations who had direct or indirect contact with the Sumerians. Some of these peoples were the Babylonians, Assyrians, Persians, and Hittites. Many clay tablets from all the Tigris-Euphrates Valley civilizations still exist, because they were preserved by the dry climate of this part of the Middle East (Southwest Asia).

3. *Indus Valley civilization.* Scientists and archaeologists have discovered the remains of an ancient civilization along the Indus River. The Indus flows from the Himalayan Mountains through a desert to the Arabian Sea. Several well-planned and highly developed cities have been discovered at various places along the river. Although some of the cities date back to about 3000 B.C., they had complex sewage systems and public baths. The people of the Indus Valley domesticated many animals, learned how to farm the land, and managed a considerable trade with the people of the Tigris-Euphrates region.

4. *Chinese civilization.* A well-organized society in China appeared about 2000 B.C. along the Hwang Ho, or Yellow River, and its tributary, the Wei Ho. Fertile soil deposited by both winds and floods provided rich agricultural land along the banks of the river. The Chinese tried to take advantage of the river by building dams and levees in order to control its flooding and to provide people with a regular water supply for raising crops.

The Hwang Ho runs through a valley surrounded by mountains and deserts. These formed natural barriers which tended to protect the Chinese from outside invaders. It was in the Hwang Ho Valley that Chinese civilization first developed. Evidence of the level of this civilization includes pottery, bronze objects, remains of domesticated animals, silk clothing, and picture writing.

Document 2

1. Does the evidence provided by this document support your ideas about the development of civilizations? Why or why not?
2. Using the information given in Documents 1 and 2, how would you explain the rise of civilizations?
3. How can you check your ideas to be more certain they are correct?

Some of the Indians who lived in North and South America reached a stage of civilization before 1000 B.C. Several important centers of civilization in the Americas were located in mountainous areas, not in the valleys of the major rivers. For instance, a tribe called the Toltecs established themselves in the highlands and plateaus of central Mexico. Another tribe—the Mayans—built cities and villages in the valleys of mountainous Guatemala. A third group of tribes developed a civilization along the coast and in the mountain valleys of Peru.

These early American Indian civilizations were based on agriculture. Successful agriculture requires an adequate water supply. Because the Indians in the mountain valleys had no dependable natural supply, they had to devise various forms of irrigation. Some Indians in Peru built terraces on the mountainsides to catch the water runoff. The people who lived near Tenochtitlán (now Mexico City) used a system of floating barges to grow crops on the lakes.

Among the achievements of the American Indian civilizations was the domestication of a great variety of wild plants (the most important of which was maize, or corn). Others were the development of a calendar and a system of picture writing, the construction of huge monuments and temples, and the production of fine jewelry and goldwork.

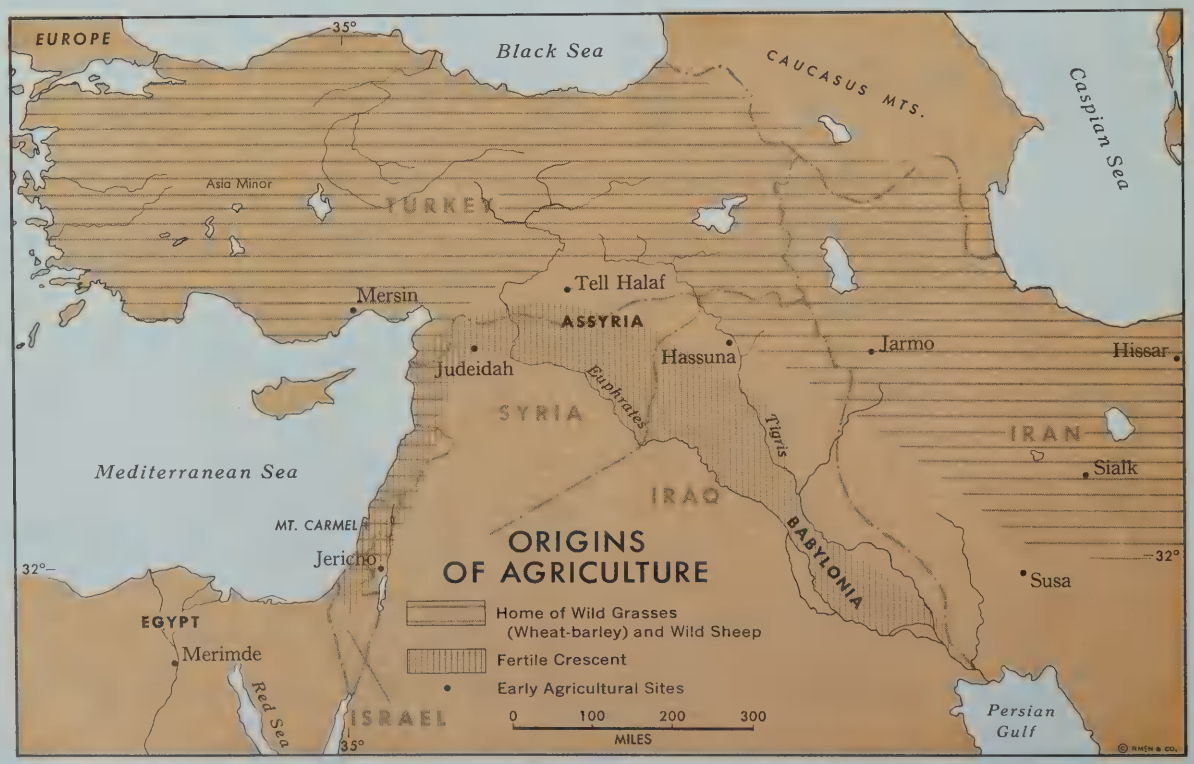
THE RISE OF AGRICULTURE

Ideas to Consider

After you have studied the map and document which follow, try to answer these questions:

1. Where were the first agricultural sites? Did agriculture develop where you would expect it to? Why or why not?
2. What effect would farming have on the way people lived? Would it contribute to a more settled way of life than herding would? Than hunting and gathering would? Why or why not?
3. What factors may determine where an agricultural people will settle? Explain.

Map 1



Document 3

One of the most important events in human history was probably the development of agriculture. Men learned how to grow crops for food at different times and in different places. It took men a long time to domesticate wild plants so that they could be a satisfying and dependable source of food.

Certain plants were developed very early in time and have become more important than most other kinds. They include wheat, barley, corn (maize), millet, and rice. These are sometimes called cereal crops or grain crops and are a very important part of nearly all people's diets.

Historians, archaeologists, and other scientists have been trying to discover the places in which agriculture began. The earliest remains of domesticated plants—wheat and barley grains—have been found in the hill regions of Iran, Iraq, and Turkey and are about nine thousand years old. Very ancient villages as well as the remains of such domesticated animals as sheep and goats have also been uncovered in this part of Southwest Asia.

Corn, or maize, seems to have been developed and eaten by man as long as seven thousand years ago. The people who first experimented with raising corn were Indians living in central Mexico, mostly in the hills and valleys of the highlands. They also appear to have grown beans, squash, pumpkins, chili peppers, and other plants at about the same time. The remains of domesticated dogs have also been found in this part of the world.

Finally, rice and millet (a grain similar to wheat and barley) were raised in China about five thousand years ago. Very ancient bones of tame pigs were found there as well as the remains of primitive domestic seeds. No one knows for certain where rice was first turned into an agricultural crop by man. Most scientists and historians think it originated in southern China in the region of the Yangtze and Si rivers. The growing of millet seems to have been concentrated in northern China around the region of the Hwang Ho (Yellow River). There is some evidence to show that millet may have been brought to China from Southwest Asia, but this could not be true in the case of rice. No rice, either wild or domestic, has ever been found as a native plant outside Southeast Asia. Rice is still the main crop in most of that portion of Asia affected by the monsoons. (The monsoons are seasonal winds which may bring substantial amounts of rain.)

Food crops seem to have first developed in three areas—Southwest Asia, South China and Southeast Asia, and Mexico. With time, agriculture spread from these areas to the rest of the world. How has it changed people's lives? Compare the areas in which agriculture was first developed with those in which the earliest civilizations arose. How do you account for what you find?

GROWTH OF CITIES AND TOWNS

Medieval Cities and Towns

Ideas to Consider

The Hanseatic League was a trading association made up of northern-German towns and groups of German merchants who lived abroad. It was most important from the late thirteenth century to the end of the fifteenth century. As you study the map of the Hanse towns, consider these questions. (A Hanse is a guild or association of merchants.)

1. Where are most of the chief Hanse towns located? What advantages do these locations have?
2. Where are the member towns, foreign agencies, and towns with trading privileges located in relation to the chief towns?
3. What might be some of the advantages of such a trading league? Disadvantages?
4. With which cities might the league prefer to trade? Why?

Map

After you have studied the map of Medieval Commerce and Trade Routes, try to answer these questions:

5. How do the major cities of Hanse fit into the general trade pattern of medieval Europe?

6. With which areas does Lübeck trade? Hamburg? What advantages might these two cities find in belonging to the same trading association? Are there other cities that might find a similar arrangement advantageous? Why?

7. Which cities would be most likely to trade with each other? Why? Which cities would be least likely to trade with each other? Why?

8. What kind of location is most desirable for a trading city? Why?

9. What factors seem to contribute to the growth of trade? What factors might hinder trade? Explain your answers.

Map 3

Specialized Cities

Ideas to Consider

Study the six pictures that follow and try to answer these questions:[1]

1. What seems to be the purpose of each of these cities or towns? How can you tell?
2. What factors seem to have played a role in the location of each city?
3. In what ways are the cities similar? Different? Explain your answers.
4. Find examples of other cities that serve purposes similar to those of the cities in the photographs. Do the new examples help to prove or disprove your ideas about the factors which determine a city's location? What services does your city offer?

[1]The sources for these photographs appear in the teacher's manual.

TOKYO 1964
FUJI FILM

Ideas to Consider

Consider these questions as you study the photograph below:[2]

1. What factors may have played a role in the location of these factories?
2. How may the location of these factories benefit the area around them? Harm it? Give reasons for your answers.
3. Are there ways of avoiding the harmful effects of industrialization? Explain.

[2]The source for this photograph appears in the teacher's manual.

Document 4[3]

1. How are the people of Oregon and Washington trying to avoid the harmful effects of industrialization there?
2. What factors will be considered before an industry is located in Washington or Oregon?
3. Will this plan eliminate the effects of industrialization you observed in the photograph? Why or why not?
4. What might happen if all states adopted the plan described in this document? Explain your answer.
5. What factors do you think should be considered before an industry is located in a city or a state? Give reasons for your answers.
6. If a choice must be made between industrial growth and a pollution-free environment without industrial advancement, which would you choose? Why?

[3]Paul E. Steiger, "Industrial Recruiting in Oregon and Washington." Copyright, 1969, by the *Los Angeles Times*. Reprinted by permission.

Which do you prefer: The booming prosperity of rapid industrialization, or the exhilarating pleasures of a pollution-free environment?

The Pacific Northwest is trying to have it both ways. The states of Oregon and Washington—both on the threshold of economic diversification—are defying traditional rules of industrial recruiting. They're demanding that incoming companies take great care not to impair their region's natural beauty or soil its air and water. And they are turning away companies that don't measure up.

Can these states attract new industry despite competition from areas less dedicated to resource protection? Gov. Daniel J. Evans of Washington, for one, insists they can. "I'm confident we can enhance both our natural resources and our industrial base," he says.

In the Northwest, of course, protecting the environment is no longer a matter of choice. "For a number of years, I've been classified as a 'bird watcher' by some irreverent souls in our state," says conservation-minded Evans. "Well, there's no question that we bird watchers have become the majority here now."

In recent years, citizens in Washington's Puget Sound region blocked two huge new plants because the locations were close to residential areas.

In Oregon, the resource protection stance is, if anything, stiffer. In the last few years, the state has sharply beefed up its enforcement machinery. "What we're projecting, I'm afraid, is inhospitality," says the state's governor, Tom McCall, adding that he would rather see Oregon lose a new plant than accept a decrease in "liveability" for local residents.

He contends, however, that ultimately the policy will enhance Oregon's attractiveness as other places go downhill.

Working against this fierce backdrop, just how well have industrial recruiters in these states been succeeding? Talks with numerous businessmen and government officials in the region suggest that, surprisingly, the Northwest is doing pretty well.

For one thing, the region's concern to protect its life style appears to be helping it draw more than its share of "white glove" industries like rare metals research and electronics. These industries generate little or no pollution.

But these states are also attracting companies in pollution-prone industries—for several reasons:

1—The cost of strict pollution control can be compensated for by the region's economic advantages.

2—The two states are using tax incentives and statewide planning to draw the interest of industrial development experts from across the country.

3—There's a growing conviction among businessmen around the country that stiff pollution control rules are coming everywhere.

There's no clear-cut statistical evidence demonstrating the extent to which the Northwest is succeeding.

While Washington, for example, has enjoyed close to the highest yearly increase in per capita personal income in the nation for the last few years, this could be attributed in part to unusual strength in the two industries that have long underpinned the state's economy—aerospace and wood products.

And while government officials in both states can revel in a handsome array of new companies or new plants that have come in during the last few years, they can't be sure just how much the pollution issue may have held down the total.

Still, the officials in both states are confident they're getting their share of new industry.

To ease the burden of installing the strongest possible pollution control systems for incoming companies, the Pacific Northwest states are relying heavily on tax incentives.

Washington, for example, allows companies to credit two per cent a year of the cost of putting in new antipollution equipment against their business and occupation taxes, for up to 25 years. The equipment must be better than the minimum required by state law, and it must be installed by June 30, 1971.

Oregon has a similar law providing annual tax credits until 1977.

To aid in deciding what sort of industries should go where, the Washington Department of Commerce and Economic Development is inventorying possible plant sites throughout the state. Meanwhile, a special task force is trying to project the demands for water in each of the river basins in the Puget Sound region, where most of the state's population is centered, through the year 2020. Another group is studying future land needs for recreation.

The purpose of such studies, of course, is to help develop some sort of statewide zoning plan which takes into account the urban, suburban and rural forces in a state and seeks to match projected demands against the region's resources base.

In Oregon, which is working on a 20-year master growth plan, the legislature this spring passed a bill setting up such a zoning plan. The plan, which becomes fully effective by 1972, sets tough controls on land use throughout the state.

EXERCISE 4

Man and His Environment: *Analyzing Why People Migrate*

In this exercise you will consider why at various times in history large numbers of people have moved their homes from one region or country to another. Why do people migrate? Why do they change their places of residence? What happens when these people come into contact with others who already live in the new area? These are some of the questions you will try to answer in this exercise.

You will begin this exercise by solving a puzzle. You will be asked to predict what pattern of settlement will result from the migration of various peoples into a region. Your prediction should be supported with reasons based on evidence.

You will then be asked to read several documents which should provide you with added information that can be used to test your ideas. To further test them, you may wish to bring in articles, descriptions, or other kinds of information. For instance, can events in American history be applied to the questions raised in this exercise?

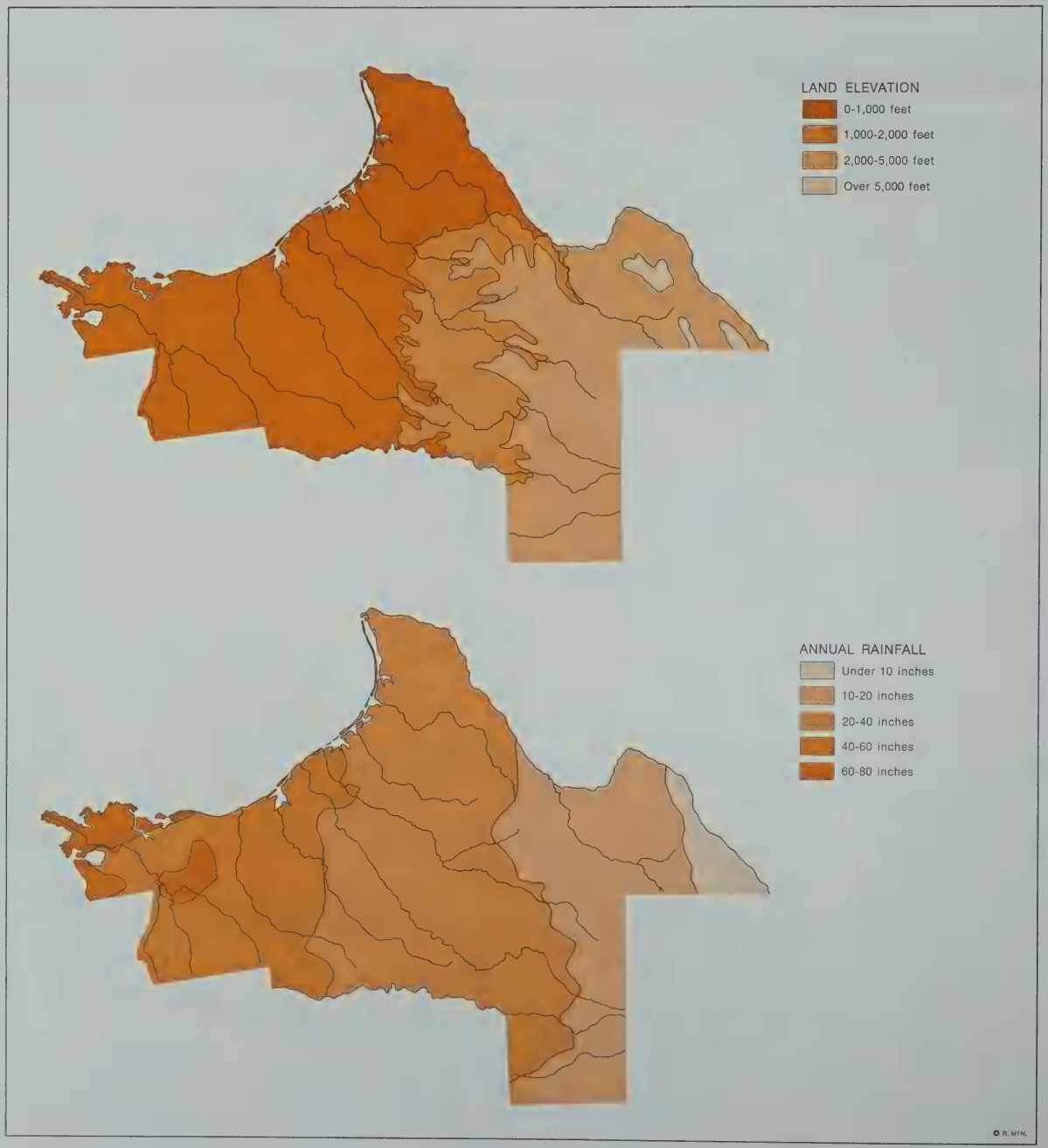
MAP GAME—THE SETTLEMENT OF BONARIA

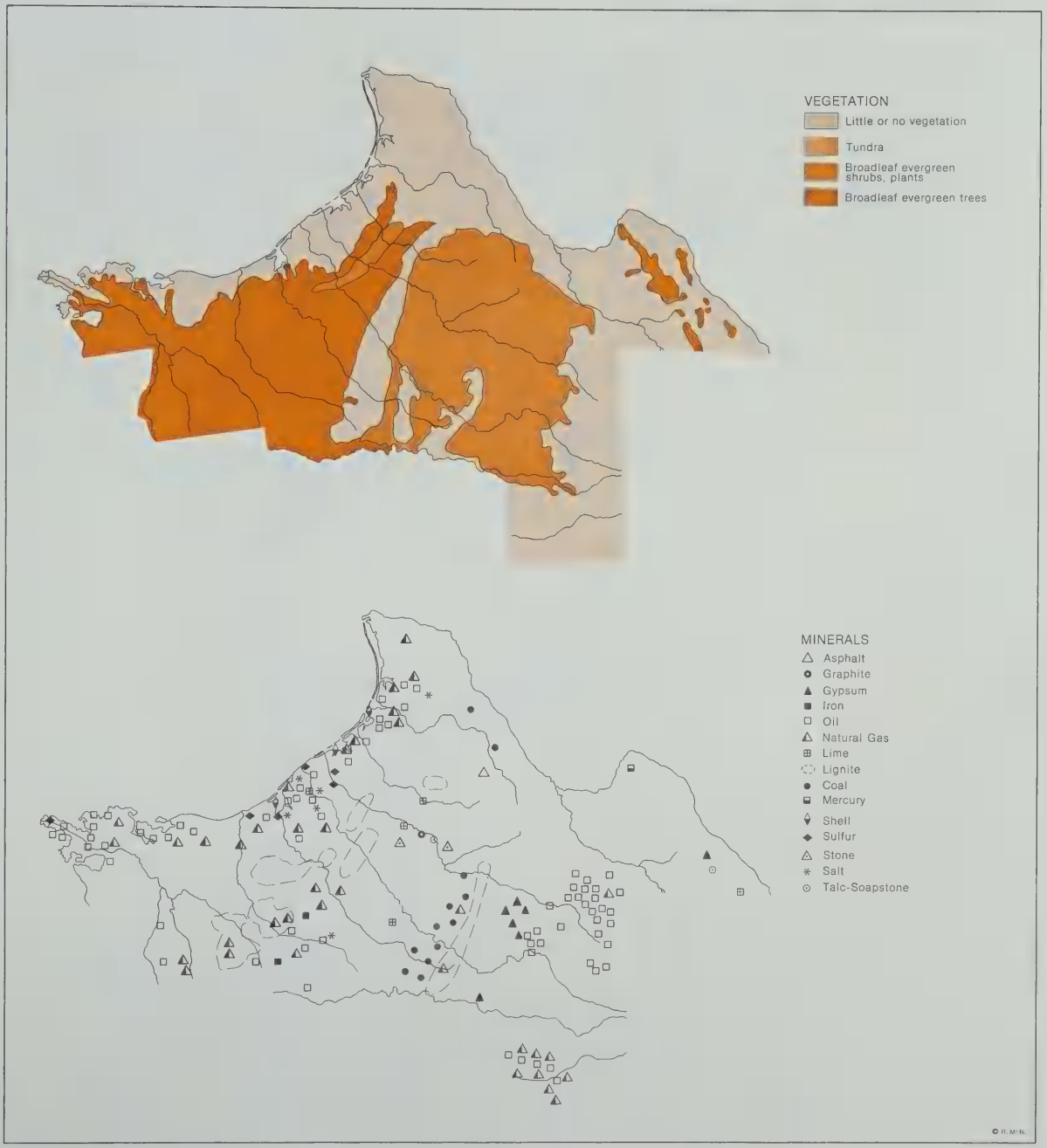
Directions

Working in groups of three or four, develop answers to these questions on an outline map (which will be provided by your teacher). Be sure to list reasons for your decisions.

If Bonaria were inhabited by (*a*) hunters, (*b*) herders, (*c*) farmers, (*d*) industrial people,

1. where would each group be most likely to live?
2. what might happen if hunters moved to the area first and then herders came? Then farmers? Then the industrial group? What would the pattern of settlement be if all the groups tried to live in the area at the same time?


LAND ELEVATION
0-1,000 feet
1,000-2,000 feet
2,000-5,000 feet
Over 5,000 feet
ANNUAL RAINFALL
Under 10 inches
10-20 inches
20-40 inches
40-60 inches
60-80 inches
© R. M'N.


VEGETATION
Little or no vegetation
Tundra
Broadleaf evergreen shrubs, plants
Broadleaf evergreen trees
MINERALS
Asphalt
Graphite
Gypsum
Iron
Oil
Natural Gas
Lime
Lignite
Coal
Mercury
Shell
Sulfur
Stone
Salt
Talc-Soapstone
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POPULATION AND GNP PER PERSON

Ideas to Consider

Most of mankind lives in relatively few of the major regions of the world. In 1968, about 75 percent of all the people in the world lived in only twenty countries —out of the one hundred or more states into which the world was divided. About half of the world's population lived in only four countries.

A nation may have a large population, but this does not mean that its population is distributed evenly. Many people live in huge cities, along rivers, or in special areas of the country. (Why is this so? Can you find clues by studying the population map? By comparing the population map with the maps in Exercise 1?)

The most heavily populated areas seem to be in China and India, on the island of Java, in northeastern United States, along the coasts of Brazil and Argentina, and in most of Europe. Other areas where large numbers of people live are indicated on the map. Can you find these areas? Why are some regions almost completely uninhabited?

According to the latest figures available—based upon United Nations statistics of 1968—the twenty countries listed in the accompanying table had the largest populations. Countries with populations that are large usually remain on this list and keep their high rank. It is usually necessary for a nation to have a dramatic change in population in order to change rank. To give you an idea of the changes that have occurred, the rankings in 1949 are shown in column three of the table. (What changes in ranking have occurred? How might you account for them?)

As you study the world maps of population and GNP per person, try to answer these questions. (GNP, or gross national product, is the value of all goods and services produced in a year in a country. GNP per person is arrived at by dividing the GNP by the total population.)

1. Which parts of the world are lightly populated? Which are heavily populated? What may explain this pattern of distribution?
2. Which countries have the highest GNP, or gross national product, per person? Which have the lowest?
3. Are the countries which have high GNP's per person also those having relatively large populations? Why or why not?
4. Which nations are richest (as measured by GNP)? Poorest? How great are the differences between them?

POPULATION SIZE

Rank in 1968	*Country*	*Rank in 1949*	*Pop. in 1968 (in millions)*	*Percent of Total World Pop.*
1	China (excluding Taiwan)	1	732	21.2 %
2	India (including part of Kashmir)	2	517.3	14.9
3	Soviet Union	3	236.7	6.86
4	United States	4	200.3	5.8
5	Indonesia	6	111.5	3.2
6	Pakistan (including part of Kashmir)	7	109.4	3.17
7	Japan	5	100.45	2.9
8	Brazil	9	86.95	2.5
9	Nigeria	16	62.3	1.8
10	West Germany (including West Berlin)	10	59.949	1.7
11	United Kingdom	8	55.23	1.6
12	Italy	11	52.55	1.5
13	France	12	50.074	1.45
14	Mexico	15	46.5	1.3
15	Philippines	19	35.6	1.0
16	Thailand	20	33.2	0.96
17	Turkey	18	33.1	0.959
18	Spain	13	32.275	0.935
19	Poland	14	32.075	0.929
20	United Arab Republic	17	31.3	0.907

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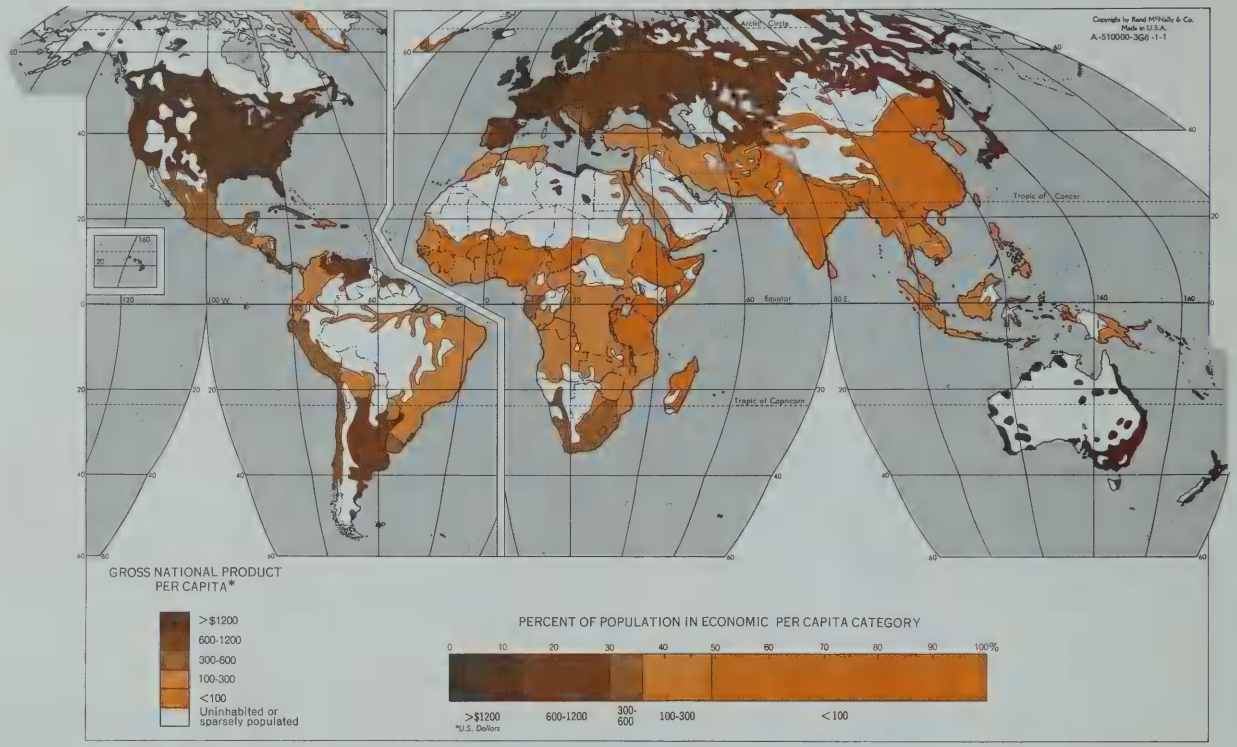
WORLD • Gross National Product



Document 1[4]

1. How do the Semang use their environment?
2. Why do they continuously move from place to place?
3. Why have the Semang remained at a low level of technology?
4. What problems do the Semang face because of their environment? Their way of life?
5. What might cause the Semang to change their way of life?

[4]From *Four Ways of Being Human*, by Gene Lisitzky. Copyright © 1956 by Gene Lisitzky. All rights reserved. Reprinted by permission of The Viking Press, Inc.

Until recently the Semang have had nothing to tempt either the conqueror or the trader into their impenetrable [impassable] jungle. Their immediate forest neighbors of other races live more or less the same lives as themselves. Anyway, they have long ago exchanged with one another whatever ideas and inventions they came here with that were mutually acceptable. Their little bands are too small to support full-time craftsmen. Everyone must hunt and dig—and make his own arrows and digging sticks. Without full-time specialists there is no time or incentive for creating the variety that breeds variety. It is therefore no reflection on the intelligence of the Semang that for a thousand years they have not pulled themselves into a higher level of culture by their own bootstraps.

Not so many thousands of years ago, the ancestors of the present Europeans lived the same sort of primitive hunting and gathering life, in narrow little family groups, as do the Semang. They too had not yet learned the art of cultivation, or of writing, and did not know the use of copper or iron. Of course, their environment was vastly different. It was a northern forest, with no plant food during the winter; these people had to depend more on the hunting of big game. They laboriously made their weapons of chipped, and later of polished, stone, the strongest and most durable material they could find readily available. Hence this period in European history —it lasted for tens of thousands of years—is known as the Stone Age.

When Europe became civilized and sent its explorers into other continents, they usually found that the newly discovered primitive peoples also made their weapons and tools principally out of stone. This was true of the Eskimos, most Indians, the South Sea islanders, and many others. Later the anthropologists fell into the habit of referring to these peoples as being "still" in the Stone Age and as "not yet" having reached the Iron Age. It was as if they believed these to be inevitable [unavoidable] stages in the evolution [development] of all human tribes, much as every individual, if he lives, must pass through childhood, adolescence, and maturity. It was forgotten that even the Europeans learned the use of metals from others, that there was nothing inevitable about it, or even about their previous use of stone. In fact, there is nothing inevitable about any human practice, whether it is part of metallurgy [science of separating metals from their ores] or tennis.

The Semang, for instance, have never had a stone age in the sense of working chiefly in stone. It is not only that good workable stone may not be so easy to find in the fertile jungle, with its floor of decayed vegetation several feet thick. It is also that this same jungle gives the Semang a material for tool-making that the Stone Age Europeans and the modern Eskimos might well have envied them.

Their chief material for tools is bamboo—a woody grass. It is extremely hard and durable, with a naturally polished surface. Its many varieties come in all thicknesses, from that of thin reeds to diameters of six inches or more. It grows in segments, making a connected series of hollow tubes. Cut off a single segment to include only one knot, and you have a ready-to-use cooking vessel capable of withstanding fire—or a drum, or a chair, depending on the diameter of the bamboo. Take a piece several segments long and bore a hole down through all the knots except the last, and you have a tube, of any

size or length you desire, for carrying liquids. Narrower lengths can be made into arrow quivers, tinder boxes, tobacco jars.

Thin, flexible rods of bamboo can be woven into an ideal bedspring or a latticework shelter. Split lengthwise into long strips, they can be woven into fine baskets. Splinters of bamboo make knives sharp and hard enough to cut designs into other bamboo. The tender shoots can be eaten. The Semang have done not at all badly in the age of bamboo.

Nor has the skipping of a stone age prevented the dawning of an iron age. In faraway Europe and America, certain commonplace products of the Malayan jungle have come to be considered treasures, and high prices are paid for gutta-percha [used as electric insulation for submarine cables and in dentistry], damar resin [used to make varnishes and printing inks], camphor, fragrant eaglewood, and even rattan. This has encouraged Coast Malay traders to brave the rain forest and offer barter to the jungle dwellers. They have brought brass fishhooks, iron bush knives and choppers, and even lumps of crude iron and scraps of tool steel. Their husked rice and cured tobacco have become much-sought-after delicacies among the Semang.

The jungle treasures eagerly bought by the Malays and white men are things the Semang can find and pick up on his normal food-gathering rounds. He has, for instance, always collected damar resin to keep his fire alive on the trail; now he has only to put some aside for the occasional trader. Thus the white man's need for the resin to put in his varnishes has given the Semang iron rattan-splitters. Because of it they have learned to make fire by striking steel on flint. They have even learned by themselves to shape iron into arrowheads by heating it and battering it between two stones. (So that stonework *is* after all introducing an iron age, or is it that ironwork is introducing an age of stone?)

The new metals have not, however, made any striking difference in the way the Semang live. We may continue to call them a people of the Old Stone Age if by this we mean only that they are still food-gatherers, earning their living by catching or digging up or knocking down their food where they find it.

This ceaseless searching for food has sharpened their forest senses to a very fine pitch. In the densest foliage they instantly recognize a bird or animal hidden in the branches. In what seems only a tangle of weeds they at once make out some edible [can be eaten] plant buried among them. The forest, for all its gloomy terrors, and no matter how reluctantly, gives them not only all the food they need, but also their shelter, clothing and ornaments, tools and weapons, medicines, and art materials.

The diet of the Semang is mostly vegetarian. They are not full-time hunters and fishers, like those primitive tribes among whom it is the regular duty of the men to forage [search] daily for animal food. But they will not pass up the chance to hunt when it presents itself, and they are very good at it—keen, clever, and patient.

In case of need they will, with their simple weapons, stand up to tigers and elephants, but then it is in self-defense; it is they who are the game. They prefer to hunt squirrels, forest rats, birds, lizards, monkeys, and wild pigs. They show a remarkable keenness of sight, hearing, and even smell in tracking these down. They seem to find by intuition the favorite watering places and salt licks, the clearings where the pheasants dance, the trees where monkeys look for grubs, the pools deep in the forest where the birds drink. They are careful and accurate shots with bows and arrows or with fire-hardened palmwood spears tipped with slivers of bamboo.

The Semang bow, five or six feet long, is considerably taller than the hunter and seems unnecessarily large for the small size of his usual game. This one alone of his more important tools is made not of bamboo but of an even more supple wood. A branch of the langsat tree is scraped down with rough stones and sharp slivers of bamboo until it is about an inch thick in the middle and tapers down to a point at either end. It is wound round with bamboo basketry for greater resiliency. The bowstring is sometimes of sinew but more usually of twisted bark fiber.

The arrows, too, seem outsize. They are a yard long and have rather clumsy-looking, heavy wooden points. The range of these arrows is some hundred and fifty yards, but the Semang usually do their shooting at thirty or forty paces, at which distance they are very accurate marksmen. Certainly there are better-made bows and arrows to be found among primitive peoples elsewhere, but not more interesting ones. For these arrows are tipped with poison.

Ipoh poison comes from the milky sap of the great upas tree, which grows, forty to sixty feet tall, in rare places throughout the jungle. These trees are owned by individual tribesmen, as are the fruit trees. The owner with a few friends will go out to collect the sap very much as we tap sugar maples, by chopping **V**-shaped gashes in the bark and letting the juice drip down into a bamboo receptacle. The sap is then poured over both sides of a broad wooden spatula, which is constantly

kept turning over a fire until the juice becomes a thick brown sticky gum. While it is still soft, the arrow points are stirred into it and then laid aside to dry.

Three ounces of sap are enough to poison a hundred points, but they must be used while the poison is still fairly fresh, else it loses its potency. Arrowheads are often poisoned again and again, since a hunter may use as many as thirty arrows a week and always tries to retrieve them.

Fresh ipoh can kill birds and small animals almost instantly, but the Semang prefer to half-paralyze their game rather than kill it. A small bird that drops dead in the thick jungle is almost impossible to find, whereas, if it can still struggle a little after falling to the ground, the hunter can follow the noise it makes. When hit by a poisoned arrow, an animal the size of a monkey will fall from the tree within two minutes, and its attempts to rub off the arrow will only break the point off under its skin.

Though care must be taken lest it spurt into the eyes, handling the poison while collecting or cooking it is not very dangerous, since to have a lethal effect it must enter directly into the blood. In any case, the Semang believe that they have an antidote for it. They say that if a man sickened by this poison eats earth of any kind he will at once get well, and that they learned of this remedy by observing a crow recover from the poison after pecking at the earth.

The bow and poisoned arrow are the ancient weapon of the Semang, but gradually they have adopted an even more interesting one from those other forest inhabitants of Malaya, the tree-dwelling Sakai. This is the poison blowpipe, which operates on the same principle as a pea-shooter. The blowpipe is a slender tube from eight to twelve feet long made from a rare bamboo in which the knots come some five or six feet apart and of which the hollow center is very narrow. A two-section length is split in two and, after the knots are bored through, is carefully fitted together again and held in place, as well as kept from warping, by an outer tube of ordinary thicker bamboo. Finally there is a mouthpiece and, just above it in the tube, a wad of the downy fluff that collects around the leaf bases of certain palms. This wad prevents the leakage of air when the hunter blows, and also keeps the poison dart from falling back into his mouth.

The very light dart, only a few inches long, is made from the midrib of a palm leaf scraped down to the thinness of a knitting needle. It is notched near the poisoned point so that it will break off in the wound. The poison used is the same ipoh of the upas tree. It is amazing how accurate the hunter's aim can be at thirty to fifty yards. He holds the long tube steadily with both fists clasped near the mouthpiece and without any other support to keep it from trembling. He gives a strong puff that makes his lips pop, the dart whirrs, and almost instantly the prey drops from its tree.

These uses of poison certainly add to the terror, though not to the contempt, with which the Coast Malay regards the Semang. It must indeed be a chilling thought on the somber jungle trail to imagine being spied on from behind every huge tree trunk by a grinning little black demon who can send you silently to your death with a mysterious poison. On the other hand, how is it possible not to admire a primitive folk who "have not yet reached the Stone Age" but who have already invented chemical warfare or, even better, chemical hunting?

Besides the fire-hardened lance, the bow and arrow, and the blowpipe, the Semang also catch some small game with pitfalls, simple nooses of fiber, and spring traps of basketry. Birds are also ensnared by the ancient European device of "liming," that is, by smearing the sticky sap of the wild fig or gutta-percha tree on splints of bamboo so that the birds' feet are caught and held in the gluey stuff.

Semang women never hunt with bows, but they do trap with the baskets they themselves have made, and they always join the men in fishing when the band comes to a river. Small fry are taken in plaited [braided] bamboo scoops, while the larger fish are speared with the long sharpened midrib of a palm leaf. Simple weirs or fish traps are also made, and there is some angling with bamboo poles.

The Semang do not know how to make canoes, though they will lash together lengths of bamboo to make a crude raft when they wish to cross rivers or to travel down them for short distances. Those of the Semang whose territory does not happen to include a deep enough bit of river or lake usually do not even know how to swim.

Hunting and fishing are, however, not the major occupations of the Semang. The greater part of their food they get by gathering wild fruits, berries, nuts, the pith of certain edible palms, tender leaves, bamboo shoots, young roots, and tubers—those starchy underground vegetables that are like our potato. The women go out regularly every day in search of plants, and it is therefore they who contribute most to supporting the family. What they chiefly look for are tubers, especially the big wild yams, which often grow three feet underground. The women dig for these, the men often helping,

with a long digging stick that has had its point hardened in fire.

The Semang overlook nothing in the way of edible plants and have even learned to depend upon many that in their natural state are quite poisonous. To eliminate these poisons often requires very complicated operations lasting several days, and it is a mystery how these people without chemical laboratories learned, in the first place, that the food was good if the poisons were driven out, and, second, how to remove the poisons. Where most other primitive peoples voluntarily deprive themselves of [keep themselves from having] many good foods by placing taboos upon them and convincing themselves that they are somehow poisonous, the Semang take really poisonous plants and turn them into good food. Surrounded as they are by plants that are in fact deadly, they have not added to the difficulties of life by inventing make-believe dangers. They seem to have no food taboos at all.

Each poisonous root requires a different treatment. One type of poisonous wild yam, for instance, is first rasped against a prickly stick in the same way that you might grate a nutmeg or a piece of cheese. Then the grating must be mixed with a little slaked lime, which chemically neutralizes the poison though it leaves the yam still inedible. Then the pulp is kneaded by hand into a sort of dough, a loaf of which is then wrapped up in a strip of fresh banana leaf, slipped into a cleft stick, and slowly roasted over the fire. Other roots have to be suspended in a basket for days in the running water of a river until the concentrated poison is dissolved and diluted. Then the Semang squeeze both water and poison out of the roots by pulling and stretching the flexible woven basket, and finally dry them over a fire. Still other roots have to be buried back in the earth, where the natural fermentation destroys the poison. If it had ever been in the destiny of the Semang to develop their own higher civilization, it would surely have been particularly brilliant in the chemical sciences.

The high points of the year for the Semang are the months in which the fruits of certain trees ripen and are ready for harvest. Then each small band, wherever it may have been wandering, comes back to its own home grounds. For though a Semang may shoot an animal or net a fish or dig up a root wherever he finds it, he will never think of picking the fruit of the mangosteen or the durian from any other trees than those that belong to his family. Even within the kinship band, to pick a durian or to collect ipoh poison from any other tree than one's own would be to invite violence.

The mangosteen is a fruit that looks very much like an orange, with a very thick rind and juicy flesh and a flavor somewhere between that of a peach and a pineapple. It does not, however, compare for popularity, among man, beast, or bird, with the durian, the favorite fruit of the millions of people in this part of the world. The durian is a very large globular fruit covered with a hard, very prickly green rind and sometimes weighing a couple of pounds. Its soft, cream-colored, cream-textured pulp is said to have the most delicious flavor, but, though it has been praised so much, there are not many white men who have finally brought themselves to taste it. For to European nostrils the durian has a most unpleasant pungent odor, so offensive even when fresh that European writers have said it is all but impossible to go into the crew's quarters of a Malay junk when the men have laid in a stock of the fruit. The seeds of the durian also may be roasted and eaten like chestnuts.

Harvesting the durian is a fairly simple matter. When the fruit is ripe it falls to the ground; then the Semang pick it up. They prefer on the whole not to climb trees, no doubt because of the unpleasant adventures one is likely to have up in the very populous second story of the jungle, with its thorns and poisons, snakes and cats, and stinging insects. The Semang are nonetheless expert tree climbers, running up the towering trunks like monkeys, using their feet and not their knees, with their arms out at full length. When tree trunks are too thick for this method, they use noosed ropes up which they clamber hand over hand.

The durian harvests are the time of the great feasts of the Semang. For once they will have more than just a few days' supply of food, and they are all in a happy, contented, generous mood. Though each man is jealously possessive about his own trees, actually the fruit is freely shared among the group. This sharing applies to all kinds of food once it is harvested, prepared, and cooked. . . .

In this the Semang resembles most other primitive peoples who live in small groups. The common principle seems to be that the *catch* is the private property of the successful hunter, but the *food* is expected to be shared among those who have less than himself. The reason is, of course, everywhere the same: No man is always fortunate, and he who lets his neighbor starve while he has plenty will have no one to help him survive in future times of need. But the generosity of the Semang does not come from a cool calculation of this principle. He shares as naturally and spontaneously [freely] among his kinsmen as do . . . our own smaller families. . . .

Document 2[5]

1. Why do the Turkmen move from place to place? What factors do they consider before they move to a new area?
2. In what ways are they similar to the Semang? Different? What factors may account for these similarities and differences?
3. How has the Turkmen way of life been affected by national boundary lines? Have the changes benefited or harmed these people? Explain your answer.
4. Why do national boundaries exist? What kind of boundaries do the Turkmen recognize? What might happen if all people accepted the Turkmen's ideas about boundaries?
5. Should nomadic peoples be restricted in their movements?

[5]William Irons, "The Turkmen Nomads," *Natural History*, Vol. 77 (Nov., 1968), pp. 44–50. Reprinted by permission.

Until a century ago, Turkmen nomads migrated seasonally over the central Asian steppe in search of pasture, their mobility [movement] preserved by their independence from neighboring sedentary [settled] governments. Today they have lost their independence, but in remote areas many still cling to their nomadic way of life.

The Turkmen inhabit a region divided between three countries—Afghanistan, Iran, and the Soviet Union—and their population is a million and a half. Although they have all been brought under the control of these countries, conquest and settlement were accomplished piecemeal, affecting some areas sooner and more drastically [violently] than others. Among those who have remained nomadic, tradition is largely intact [unbroken], and when I began my study of the Turkmen in the winter of 1965, I decided to concentrate on this group.

The devotion of these people to a migratory way of life can be understood only in historic perspective. The Turkmen are by tradition a pastoral people [herders], and for them nomadism is a way of using sparse and seasonably variable pasture for livestock production. But it was, in the past, something more: a means of resisting firm government control. Such resistance was a consciously maintained tradition among the Turkmen, and nomadism was the chief means to this end.

Their eagerness to resist the power of sedentary states grew out of an understanding of what government control meant to settled people. In the harsh social environment of the traditional Middle East and Central Asia, settled people were frequently exploited [taken advantage of] through the imposition [laying] of heavy taxes and rents.

The Turkmen not only avoided such exploitation, but by raiding and collecting tribute from their sedentary neighbors, they went a step further and put themselves in the position of the exploiter. A century ago they were notorious as brigands [bandits] and especially as slave raiders. Slaving activities were conducted primarily in northeastern Persia (now Iran): Turkmen raiding parties ambushed caravans or attacked villages, retreating quickly with their captives to their own territory.

The portion of the Central Asian steppe inhabited by the Turkmen stretches east from the Caspian Sea to the Amu Darya, a large river that empties into the Aral Sea. The central part of this area is the Kara Kum, or "black sand," a vast, largely uninhabited and uninhabitable desert. The majority of the Turkmen are concentrated in two somewhat more fertile regions bordering the Kara Kum. One area consists of the banks of the Amu Darya; the other is a long strip of plains and low mountains, lying south of the Kara Kum and separating it from the Iranian Plateau. My study was carried out in a section of the latter area—in the Gorgan Plain of northern Iran.

All nomadic Turkmen are divided into residential

groups known as *obas,* and my research was focused on a single *oba* consisting of sixty-one households. This group migrates within the Gokcha Hills, a patch of low hills that protrudes [extends] into the Gorgan Plain. An *oba* is associated with a definite territory, and all of its members share common rights over that territory, including the right to use the pastures and any natural source of water there. All have the right to dig wells, but once such wells have been dug they become the private property of the persons who expended their labor in digging them. Similarly, all may plow up virgin land for cultivation, but once someone plows a section it becomes his private property.

Throughout the year these nomads live in yurts, a Central Asian tent, which consists of a hemispherical wooden frame covered with felt. They make their living primarily by raising sheep and goats, and their pattern of migration is largely determined by the needs of their animals and by variations in pasture and water supply. The climate of the Gorgan Plain is characterized by definite wet and dry seasons. The wet season begins in the winter, and during this season the Gokcha Hills and surrounding steppe are covered with a short, but relatively thick, crop of grass giving the appearance of a vast, freshly mowed lawn. Winter temperatures are mild, rarely dipping below the freezing point. The rainwater, as well as occasional melted snow, collects in scattered depressions to form pools from which water is taken for household needs. During this season, the nomads camp where water and suitable pasture can be found. Ample pasture is usually available close to their dry-season location, so that most of their migrations are quite short. In this respect, they differ considerably from many of the pastoral peoples in and around the Iranian Plateau who make long seasonal moves ranging over vastly differing . . . zones. . . .

The reason for this lies in the needs of their livestock. During the latter part of the winter, the lambing season begins and the Turkmen must be near their herds to assist in cases of difficult birth and to care for the lambs, which are kept inside the yurts at night to protect them from the cold. Because the lambs are too weak to travel far, they must be pastured near the camp. Even after the young animals are weaned, the adult females must be milked daily, and for this reason, the nomads still keep the livestock near their camp.

With the onset [beginning] of summer, the dry season begins, and the green pastures of spring are gradually transformed to a barren brown. The rainwater pools disappear, and now the nomads must camp near their wells. When the pastures become sparse . . . , the animals stop giving milk, and it is no longer necessary to keep them nearby. They are then sent south to the banks of the Gorgan River, where they graze the stubble of harvested fields. The younger men of each household accompany their family's livestock and live separately from the rest of the household, [in] . . . a small lean-to-like tent. . . .

This division of labor is possible because herding, as well as other forms of economic production, is organized by extended families, consisting of an older man and his wife, his married sons with their wives and children, and his unmarried sons and daughters. Each family produces only a part of what it consumes: milk and milk products, meat, felts and carpets for their yurts, and a small amount of grain. In hope of a late spring harvest, wheat and barley are planted during the winter in valley bottoms or other depressions where water tends to collect. This is a gamble, however, since often the crop does not develop, but when a crop can be harvested, the yield is generally sufficient to make up for the losses of grain put down as seed in bad years.

The rest of their needs must be purchased. Cash income comes from the sale of wool, felts, carpets, and animals for meat. The basic item in their diet is bread, and they purchase the bulk of the wheat from which the bread is made. Rice, tea, and sugar must all be bought. Clothing, cloth, metal tools, and nowadays, a hand-powered sewing machine and a transistor radio, are other items that a typical nomadic Turkmen family buys. About once a month, two or three men from each *oba* travel to the nearest city to purchase supplies and to sell their products: animals, wool, and carpets. Thus, the pastoral economy of the Turkmen is market-oriented, even though production is organized along family lines. . . .

The older men, who make the important decisions, know their genealogies [family histories] well. Each of them can, on the basis of his genealogy, identify a group of people who share with him a common ancestor in the male line four generations back [patrilineal kinsmen], and a slightly larger group of people descended from a common ancestor five generations back, and so on, until he has identified himself with descent groups including thousands of families. Ultimately all Turkmen believe they are united by their genealogies as the descendants of a single man, Oghuz Khan. Although the remoter generations of these genealogies are vague and legendary in character, this is of no practical importance since the Turkmen take them seriously as a basis for arranging their social obligations.

Traditionally, the primary function of these descent groups was defense of the individual's rights through violence, or the threat of violence. Defending one's patrilineal kinsmen was a basic duty in Turkmen social life. This was extremely important, because the absence of state control and of tribal offices with sufficient authority to enforce law and order meant that the strength of a Turkmen's patrilineage was the only guarantee of his rights.

When someone violated a Turkmen's rights by robbing him, injuring him, or killing him, his patrilineal kinsmen were obligated to seek redress [set matters right] by whatever means was necessary, even including violence. In cases of murder, for example, either the murderer or one of his lineage-mates was killed in revenge. Who sought redress for the victim and who defended the culprit [the person who did wrong] were matters determined by genealogy and by the gravity [seriousness] of the affair. Small problems could be handled by the immediate families of the victim and the culprit. As matters increased in seriousness, a wider and wider circle of people who shared common patrilineal descent was called upon for assistance.

Those who were, on the basis of their genealogy, close to neither party also had a prescribed role. It was their obligation to attempt to bring about a peaceful settlement and, if possible, to prevent bloodshed. If the offense was slight, they merely advocated [favored] peaceful discussion and suggested compromise. In cases of murder, the neutral party aided the culprit by hiding him from the victim's kinsmen and by helping to arrange his escape to some distant place of refuge. Protecting those who came seeking refuge was part of the obligation of neutral parties to prevent bloodshed. The Iranian government has been attempting to eliminate this traditional system of self-help and to enforce law and order itself; in remoter areas, however, it has not always been successful.

The composition [makeup] of Turkmen *obas,* like many other aspects of Turkmen social structure, reflects the importance of patrilineal descent. Most of the men of any *oba* are closely related in the male line; in addition, there are usually a number of unrelated families who have come to the *oba* fleeing feuds in their home territory. While these refugees reside there, the *oba* will protect their rights of person and property against outsiders.

The men of an *oba* traditionally selected a headman, who took charge of all dealings with the outside world. Today, in theory, he is appointed by the government, but in practice the local officials usually allow the men of the *oba* to indicate the man they want as their headman. The headman has no authority, but merely acts as a spokesman for the *oba* as a whole. Any important decision must be based on consensus [the collective opinion of all those concerned]; it must be preceded by discussion by all the men of the *oba.* Usually a headman is selected for his intelligence and integrity and for his ability to speak Persian, the language of the government officials with whom he must deal.

Ordinarily a group of fifteen to thirty *obas,* which belong to the same descent group and occupy contiguous [neighboring] tracts of land, form what the Turkmen call an *il,* a word best translated as tribe. In the days of intertribal warfare, the *obas* of such a tribe were usually on peaceful terms with one another. Tribes that adjoined were usually hostile, and there was much raiding between them.

One of the functions of the Turkmen tribe that has not survived government control is the practice of protecting neighboring . . . villages. These villages were especially vulnerable [open] to the raids of the Turkmen, and to gain a measure of security and protection each village paid tribute to the Turkmen tribe nearest it. In return, the tribe agreed not to raid the village, and to prevent raids by other Turkmen tribes. They also agreed to compensate [pay] the village for losses if they were unsuccessful in preventing raids by other tribes. In effect, the exchange of protection for tribute was a peaceful substitute for raiding.

The Turkmen were able to resist government control, to raid, and to collect tribute because their nomadic way of life made them an effective military force. They were good horsemen and were well supplied with horses. Raids, both of sedentary villages and of other nomads, were frequent events and provided the Turkmen with excellent military conditioning. When clashes with the Persian military forces occurred, normally hostile tribes would unite to turn out a large body of cavalry. This seasoned cavalry could usually hold its ground against the Persian forces, but even when met by superior strength, the Turkmen did not surrender. Instead, they would retreat into the desert north of the Gorgan River, taking their families and livestock with them.

Thus, mobility preserved the power and independence of the Turkmen; this was why they consistently avoided anything that would compromise it. Much of the territory they inhabited was naturally fertile and was crossed by numerous streams. The construction of irrigation works and the practice of intensive agriculture

could have made this land more productive. Permanent houses at their dry-season locations could have increased their comfort. The Turkmen, however, would not accept such trends away from nomadic life. They concentrated instead on livestock production, on raiding, and on the collection of tribute.

During the last century, the political independence of the Turkmen has gradually been whittled away. Advances in military technology have shifted the balance of power between the nomadic tribes and settled society and have led to the conquest of the nomads by sedentary powers. Most of the Turkmen were conquered by the Russians during the latter half of the nineteenth century. Those on Iranian soil were subdued and brought under firm control in 1925.

The objective of conquering governments has been to encourage a transition [change] to a more sedentary and peaceful way of life. Such a transition, however, could rarely be accomplished at once. The nomads viewed settlement as a consolidation of governmental authority over them, and were not eager to take up sedentary life. For this reason, in the thirties the Iranian government began a policy of forced settlement not only of the Turkmen but of all of the Iranian tribes. The nomads I studied had been forced to build permanent houses at their dry-season locations in 1936. For five years, under the watchful eyes of government authorities, they lived in these houses during the dry season and migrated with their yurts only during the wet season. This form of semisedentary life developed naturally out of their pattern of pasturing sheep away from their dry-season camps. That it caused no economic difficulties is revealing. The nomads had maintained a completely mobile existence for political rather than for economic reasons, and a transition to a semisedentary existence could be made without economic difficulty.

In 1941, Russia occupied northern Iran because it was fearful of Iranian co-operation with the Germans, and the process of settlement was reversed. The Iranians had been interested in modernization, but the Russians were interested only in sufficient order to keep their supply lines to their Western allies open. Many of the Turkmen who had resented forced settlement reverted to nomadism. The people with whom I recently lived destroyed the houses they had been forced to build and returned to living year-round in yurts. Security deteriorated [weakened], and banditry became rife [common] in the remoter and more arid regions, such as the Gokcha Hills.

After the Second World War, the authority of the Iranian government was restored in the Gorgan Plain and efforts to modernize the Turkmen were renewed. The government had come to understand the limited value of the type of force measures used in the thirties. Its objective was not to reduce the Turkmen to the traditional position of exploited peasantry, but rather to integrate them into a society that was on the way to becoming a modern nation. This meant the terms would have to be satisfactory to the Turkmen themselves. In line with this policy, persuasion was used rather than force. Great progress was made in the fertile and populous region south of the Gorgan River.

In the Gokcha Hills, things change more slowly. By 1960, the government had eliminated banditry, clearing the way for further progress. The Turkmen of this region, however, have remained nomadic to the present. Nevertheless, there are indications that they too will eventually be caught up in the trend of modernization.

The Gokcha Hills Turkmen are beginning to realize that their nomadic way of life has no place in the future. In 1967, when I left the *oba* that I had studied, their headman had begun to discuss the need of a school for their children. He is an intelligent man, aware that his own children will have new opportunities if they become literate [able to read and write]. He is convinced, however, that they cannot persuade a government school teacher to live in a community that consists only of yurts. He has been telling the men of his *oba* that they need a school, and that in order to have one they will have to build houses as they did in 1936.

The headman will find that winning the men of his *oba* to this view is a difficult task. Eventually, however, they will build houses and a school, and ultimately they will be drawn into the mainstream of Iranian national life.

Document 3[6]

1. What is known of the early inhabitants of Easter Island?
2. What aspects of the physical environment may have played a role in the development of a civilization on Easter Island? Give reasons for your answer.
3. Why did conflicts develop on the island? What were the effects of these conflicts? How did they affect the patterns of population distribution on the island? Why?
4. How could conflicts such as those on Easter Island have been avoided? What could have been done to resolve them?
5. Why is so little known about the people of Easter Island? What has happened to the earlier people who lived on the island? Why?

[6]William Mulloy, "Easter Island," *Natural History*, Vol. 76 (Nov., 1967), pp. 75–80. Reprinted by permission.

On Easter Sunday, 1722, a Dutch explorer, Jacob Roggeveen, landed on a remote volcanic island some 2,200 miles west of the South American coast. There, on the easternmost island of Polynesia, which he named Easter Island, the Dutchman found an advanced society suffering from violent internal conflict [wars among people in that society], its people living to a considerable extent among the ruins of their former spectacular achievements. Monumental stone statues had been pushed from their pedestals and lay broken, while the island inhabitants hid from one another in caves. Roggeveen was no doubt impressed by the huge sculptures and the other signs of an advanced civilization, but, like other European explorers who later visited Easter Island, he did not feel that the place had much economic potential [usefulness as a place to live and work] and consequently assigned it no significance in his log.

So Easter Island, now well known for its gigantic, brooding statues, and for the mystery surrounding the origin and growth of its complex culture, was largely ignored for almost one hundred years. Then, in 1805 the schooner *Nancy*, out of New London, Connecticut, carried away twenty-two islanders for use as slaves, and the Western world realized that the island had economic possibilities that appealed to its value system. With time, the slave raids increased, and between 1859 and 1862, Peruvian raiders carried off about one thousand people to work at guano [a substance used as a fertilizer] mining off the coast of Peru. As a result of a protest lodged by the Bishop of Tahiti, the few survivors of this crime were returned to Easter Island. But the returning islanders had contracted smallpox, and the introduction of this disease to the island all but annihilated [killed off] the remaining inhabitants. Thus, the once high Easter Island culture, already torn by internal warfare, was dealt a death blow by the slave raids. In 1877, a visiting Frenchman reported that only 111 islanders remained.

While the population of Easter Island has now increased to about a thousand individuals, the cultural collapse took with it most of the clues for answering a question of considerable importance to anthropology: How, on this remote ocean-bound island, had such an advanced society developed in the first place? . . .

Easter Island is one of the more isolated localities of the world. Surrounded by the sea, it is outside the range, so far as we know, of systematic two-way Polynesian voyages. It was probably discovered several times by lost wanderers who could not return to their original homes. Although most of the culture, including the language, seems to be Polynesian, a few traits strongly suggest that American Indians may have made landings and settled on the island. . . . And with a population that could never have exceeded three or four thousand people, one would expect the most simple ways of life. Yet we find such hallmarks of cultural complexity as

written texts not known to be related to any foreign script, a political structure capable of planning and coordinating public works, an organized priesthood, and a sophisticated [advanced] interest in such celestial [heavenly] phenomena as the equinoxes and the solstices. In addition the islanders [built] . . . about a thousand statues, some of which weigh hundreds of tons, in addition to numerous other religious structures. All this on so small and remote an island understandably evokes genuine astonishment.

A reliable radiocarbon date of A.D. 857, ±200 years, indicates that a human population had already arrived on the island during the ninth century. Since this date was obtained from a large statue-bearing altar unlikely to have been built among the first activities of new arrivals, it is probable that initial discovery occurred much earlier. The first immigrants certainly devoted many years exclusively to such basic problems as the development of food and shelter sources. Their economy was based on fishing and the cultivation of such crops as sweet potatoes, yams, bananas, sugar cane, taro, gourds, and the paper mulberry so useful for making tapa cloth. It is not known which of these were brought by the first migrants, but all were in use at the time of first European contact. The chicken and the *kioe,* or Polynesian rat, were also present and used for food. The relative ease with which food crops can now be grown best explains the rapid development of what was to become by far the most spectacular religious building[s] . . . in all of Polynesia. This required an economy that permitted a good deal of leisure.

The scattered distribution of the religious structures indicates that the people were widely dispersed along the coasts and adjacent [close-by] interior areas. Local traditions relate that the population was divided into semi-independent kin groups of some sort. Each group seems to have had one or more religious structures, usually large open-air altars. . . . Although they varied greatly, the typical form was a narrow dry masonry platform, at times as much as 650 feet long and 16 feet high, which sometimes had an elevated central section and lateral wings. This platform usually had a sloping paved ramp built against one side. An artificially flattened plaza, where religious ceremonies were held, frequently faced the ramp. Beyond this was a row of long, narrow houses shaped like overturned canoes, where, according to tradition, members of the priesthood lived. . . . Some . . . platforms were of relatively crude uncut masonry, while others had gigantic blocks precisely cut and fitted in a technique strongly reminiscent of Inca [an Indian tribe in Peru] masonry. Most *ahu* [open-air altars] lay near shores with plazas on the inland side. Farther inland were domestic establishments and cultivated lands. . . .

Ahu ruins vary greatly in size and individual characteristics. Many have been rebuilt several times; innovations [new things] have been added; usually size and height have increased. Perhaps competition among kin groups produced the impressive structures. It is likely that size and ostentation [showiness] of features increased with the numbers of the groups that owned them. Although some statues were of stone obtained in a variety of locations, it would seem that early in the statue-building period a single source became dominant. This was the tuff from the interior and exterior south slope of the volcanic cone of Rano Raraku in the southeastern part of the island. Here intensive quarrying was done, with statues being completely carved while still attached to the rock. When detached they were lowered down the side of the volcano on their backs. Some were initially slid into prepared holes near the base of the talus and erected in these. Here more than seventy still remain, of which the tallest is 37 feet high. Nearby are about thirty others lying mostly prone. These may have been tipped forward out of their holes in preparation for movement to *ahu* in other locations. Many others, presumably in the process of transportation, lie along roads in various parts of the island. Remains of extensive quarrying operations are also found above the talus slope, where at least two hundred statues can be seen in every stage of preparation.

Everywhere in the quarry are the discarded [cast-aside] basalt chisels or picks that were used in carving. Some might have been laid down on the day quarrying ceased. The number of statues in various stages of completion suggests that many crews worked at the same time. It is not known whether each *ahu*-owning community sent its own representatives or whether the carving was in the hands of specialists, but in any event, a large proportion of the island's small population must have engaged in one or another aspect of the statue-building labor, judging from the amount of work that can now be found. . . .

At the southwestern corner of the island lies the village of Orongo, which occupies a spectacular location on the narrow-crested western lip of the crater of Rano Kau. To the west is a steep cliff descending more than 800 feet to the sea where lie the three islets called Motu Nui, Motu Iti, and Motu Kaokao. On the east an almost equally steep slope descends some 650 feet to the almost

mile-wide crater lake of Rano Kau, which is covered by a varicolored mat of totora reeds solid enough to walk on—a hauntingly beautiful setting.

Formerly, Orongo was occupied during part of each September by representatives of the various kin groups. A ceremony was held that involved, among other things, a contest in which the participants descended the cliff and swam to the islet of Motu Nui about a mile offshore. The first to bring back an egg of the *manutara,* or Sooty Tern, was declared winner. His sponsor became *tangata manu,* or bird man, and occupied a position of special ceremonial importance during the following year.

Orongo is the site of about 47 houses, which are constructed differently from those found elsewhere on the island. The typical form is a narrow ellipse [oval shape] with walls made principally of thin stone slabs. . . . Most houses are built into slopes so that one side is below ground level.

South of the village an extensive area of basalt outcroppings is beautifully decorated with large, excellently executed petroglyphs [carvings of inscriptions on rocks] done in high relief. Many figures of the *tangata manu* (man wearing a bird mask) commemorate the egg race winner's sponsor, and others depict a local god called *Makemake.* The one small *ahu* at Orongo has a kind of sundial which marks the position of the rising sun at the equinoxes and summer and winter solstices. Ceremonies were held here as late as 1866 or 1867, and we have more complete information about these events than of those associated with the *ahu.*

Although *ahu,* statues, quarries, and the village of Orongo are among the better-known ruins, there are many other monuments and examples of architectural excellence, artistic accomplishment, and engineering skill. These range from elevated tombs and crematoriums to circular, clustered enclosures in which paper mulberry was grown; from the hundreds of conical towers that marked the boundaries of land owned by adjoining groups to the masonry-lined caves that were used as residences and refuges from hostile kin groups. Scattered throughout the island are the remains of thatched dwellings and masonry chicken coops erected during prehistoric times. The house of the common man was simpler than that of the priest and was usually located inland, adjoining agricultural areas.

Taken as a whole these and many other structural remains tell of an industrious population with a prosperous economy capable of producing significant amounts of leisure, which could be devoted to time-consuming religious endeavors. This architectural and artistic activity reached its zenith [highest point] about 1680, at a time shortly before the first historic contacts, when the available land supported an optimum population [the number of people that can live most comfortably in this area] and the economy had developed its greatest productivity. These factors contributed to maximum organization and made it possible for Easter Islanders to produce a remarkable quantity of religious statuary and architecture.

But an effective equilibrium [balance] between population and resources rarely lasts long in any culture, and this one was no exception. . . . It seems likely that this balance began to deteriorate [decline] shortly before the first European contacts, because of over-population that resulted in competition for agricultural land and fishing rights. Although ritual cannibalism [cannibalism for religious reasons] may have been present earlier, it appears to have become a more practical matter once population pressure became intense. The groups carving statues at Rano Raraku were probably no longer safe and work at the quarries ceased. The extensive unfinished work and the tools lying at hand give the impression that labor there halted suddenly. Perhaps all the workers fled to the protection of their kinsmen on a single day, thus terminating [ending] a stoneworking tradition that had taken centuries to develop.

One of the characteristic goals of the ensueing [following] warfare was the over-throwing of statues of enemy groups and destruction of their *ahu.* Possibly the ten or so kin groups, driven by hunger and desperation, attacked each other's monuments to destroy their enemies' source of supernatural power. Excavations were dug under the statue pedestals, and as the figures crashed down, the red scoria topknots rolled many yards inland. Sometimes, basalt slabs were carefully set on edge in front of the statues so that when they fell they were sure to break across the neck, and could not be erected again. The islanders still tell with intense emotion of defeated people hiding in caves who were hunted down and eaten by the victors. Once the older leaders and the priests lost their power, and their lives, all vestiges [traces] of order and security vanished. Many people sought the protection of the *matatoa,* the strongest of the island's warriors. Predatory [Robbing] bands appeared. This warfare may have lasted for more than one hundred and fifty years (from about 1680 to 1860), with some groups able to maintain their religious structures and organization intact much longer than others. It continued until well after European contact, for as late as 1838 a visitor reported nine statues still standing on two *ahu* on the west

coast. There are no reports of statues standing on *ahu* after this time. The only ones to be seen today are the previously mentioned eight, which have been re-erected in modern times.

Warfare brought a serious cultural decline. While evidence suggests that the dead were once cremated, after warfare began, many stone-lined tombs were built among the fallen statues and in the ramps and platforms of the destroyed *ahu*. Other cadavers [dead bodies] were simply laid out on the ramps and among fallen statues and covered with stones. As a result, many destroyed *ahu* were almost entirely covered with stones so that few vestiges of their formerly impressive masonry and architectural characteristics remain visible. Some took on the appearance of long, sloping piles of stone. New *ahu* were built of easily piled small stones in new locations, apparently to provide additional burial places.

Upon this chaotic [disorganized] scene was superimposed the attention of the New World slavers and whalers, who harassed the Easter Islanders [troubled them with repeated attacks] for an additional two-thirds of a century and who wrote the final page in the history of the culture's destruction. It was during this period that vast amounts of knowledge concerning the history and culture of Easter Island were forever lost. . . . The few people left could maintain little of the complex culture of earlier times. Most of it was soon forgotten. All of the priests who could read the script engraved on thousands of wooden tablets died as a result of the slave raids. When systematic attempts were made to find local people who could read the tablets, the stunning discovery was made that none were left. The unique Easter Island written language was lost, and despite nearly a century of effort by several highly trained linguists [language specialists], the few surviving wooden tablets remain undeciphered [a puzzle]. . . .

Increasing attention has been devoted to the preservation of monuments and to further investigation of the island's anthropological significance. Islanders are proud of their heritage, and are apparently happy to see the influx [pouring in] of tourists resulting from recent interest in the island as an outstanding example of achievement in isolation.

Ten years ago, an average of only two ships per year visited this Pacific outpost. Today, the first of several planned hotels is already under construction. An airstrip was recently completed and a regular schedule of tourist flights is in operation. It seems that the islanders' long isolation is at an end and that in the twentieth century they are to become a part of the world community. It is to be devoutly hoped that they will find minimal cause for regret.

[7]Joseph B. Schechtman, *The Refugee in the World*, pp. 89–140. New York: A. S. Barnes & Co., 1964. Reprinted by permission.

Document 4[7]

1. What aspects of the physical environment may help to explain why Indians do not share a common language?
2. What are the major reasons for the forced exchange of population described in this document?
3. Do you think that solutions other than forced migration were possible? If so, what were they? If not, why not?
4. What were the results of this exchange for Hindus? For Moslems? Were the results generally beneficial or harmful? For whom? Why?
5. When such an exchange occurs, who, if anyone, benefits? Explain your answer.
6. What particular problems do people face when they are forced to leave their own country and migrate to another one?

7. What seem to be the most common causes for population exchanges or mass migrations? Can you find examples similar to the one described in this document? Can you find examples of population movements which took place for different reasons?

8. Do you approve of the way people were treated during this exchange? Should this exchange have taken place at all? Under what conditions is this type of exchange justified? Explain and try to find examples that support your views.

9. How are natural resources divided between India and Pakistan? (You may wish to use atlases, encyclopedias, and other books to find this information.) What may this division suggest about the future development of both countries?

Long before the 1947 partition of the Indian subcontinent into India and Pakistan, its 389 million inhabitants had been speaking 325 recognizable languages, 15 of them for official purposes, and many more dialects. In addition to being divided by tribe, nation, caste, and race, they were split into several warring religions and sects, including Hindus, Moslems, Buddhists, Sikhs, Christians, and Jains, separated into a number of distinctive groups, for whom not their country but their religious community is the basis of nationality. "For that reason," said, in 1946, James C. De Wilde, who had had twenty-five years of experience in the Far East, "one will look in vain for an 'Indian.' That type as we in the West fancy him, does not exist; one will only find Hindus, Moslems, Sikhs, Buddhists, etc." . . .

In America and in Europe the terms "Hindu," "Moslem," and "Sikh" are used as merely designating religious groups. Technically that is correct. But in India these terms were understood and used differently. The word "religious" seldom appears in Indian newspaper headlines in connection with group conflicts. Such group differences are referred to as "communal." Religious sects or groups are called "communities." That is closer to the actual state of affairs. It is the things that are held or done "in common" that identify and distinguish each group. Religion in India is not just a faith. It is a way of life sufficiently differentiated [marked off by differences] from other ways of life to provide complete self-identification within each group. There is a deep gulf between the Moslem religion and mode of life and that of the Hindus. Their notions of social, political, and even economic affairs are widely divergent [different]. Mohammed Ali Jinnah, the foremost leader of the Moslem League, once defined the essential difference between his people and the Hindus as follows: "They worship cow. I eat cow. I defile a Hindu if my shadow falls across him. A Hindu would not take water from my hand. We are utterly different." The Sikh way of life, too, with its denial of caste, that very essence of the traditional Hindu way of life, has set barriers between them and the majority community. But between Sikhs and Moslems, too, there are long generations of conflict. For it was under the hammer blows of Moslem pressure in the Punjab that the Sikhs were forced into religious and military cohesiveness [union].

There also were far-reaching differences of a socio-economic nature between the 22 per cent of India's Moslem population and the 68 per cent Hindus. The bulk of the Moslems in India have been poor agriculturists. It was chiefly the poorest Hindu who became converted to Islam. As a result, Moslems have been less advanced than Hindus educationally and politically. They have found it difficult to compete with Hindus in commerce and, when there was open competition, in obtaining official posts. While the Moslems were for the most part farmers and producers, the Hindus have served as the middlemen who get the produce to market. The Moslems were becoming increasingly conscious of their economic inferiority, citing countless examples in which they were being "driven to the wall" by real or alleged [charged

without proof] unfair Hindu business practices. In a study, *Pakistan and Moslem India,* published in Bombay in 1943 with a foreword by M. A. Jinnah, the Moslem author complained (page 4) that

> . . . there are certain occupations (shop-keeping, the grain and cloth markets, money-lending) entirely reserved for Hindus and the Moslems have been completely shut out of them . . . even in the purely Moslem areas. . . . The Hindu middle class is prosperous and flourishing, and controls the internal and external trade of the country. . . . The Moslem middle class in cities has no choice left except to work as laborers or to seek petty jobs in Government service. . . . The Moslems cannot look upon this state of affairs as a *fait accompli* [accomplished fact]. Nor can they accept forever the condition of being a debtor community.

Inter-communal tension [unrest] increased noticeably with the preparations for British withdrawal from India. When offering dominion status to the whole of India, the British Government on March 29, 1942, made a special proviso [condition] that the future Indian Constitutional Convention conclude a treaty with Great Britain "for the protection of racial and religious minorities." Yet, this British scheme for protection of racial and religious minorities in all of India, to be guaranteed by a treaty with Great Britain, has never materialized [become an actual fact]. Mohammed Jinnah's campaign for a separate Moslem state of Pakistan achieved its goal, but it also intensified [made worse] and brought to a climax the mutual distrust and fear among Moslems, Hindus, and Sikhs, in particular in those areas where the communities were fairly evenly balanced and one or more of them dreaded becoming a minority after the partition [division of a country—in this case, into two separate states]. Each of these potential minorities felt uneasy and depressed at the thought of being left to the mercies of the surrounding majority. . . .

Leaders in both dominions honestly tried to eliminate [get rid of] this tense and explosive minority complex. On Independence Day (August 15, 1947) they eloquently reiterated [repeated] their guarantee to minorities. "There is no doubt of the leaders' sincerity," Robert Trumbull cabled *The New York Times* from New Delhi on August 16, "but the question whether Hindus and Moslems can live amicably [peacefully] side by side remains to be answered by events." The answer was given quickly. One month later Trumbull reported: "The leaders of both new nations urged these minorities to stay where they were and guaranteed protection. These leaders were simply not in a position to make such guarantees on behalf of the ignorant fanatical [enthusiastic beyond reason] masses. Events proved that these assurances were worthless."

Trouble started in the strategic [important for its position] province of Punjab. Moslems constituted there a majority—57 per cent of its total population of 28,418,000—and the Moslem League was determined to win the whole of this rich, food-producing province for Pakistan. This design was violently opposed by the 4 million Sikhs and by the Hindus. While forming less than 30 per cent of the Punjab population, the Hindus dominated industry, commerce, banking, and the professions in the province; they feared that if it went to Pakistan, discriminatory legislation would very soon drive them out of business. . . .

Claims and counter-claims to Punjab areas were pressed so hotly that the fires of communal conflict were ignited several months before partition was effected. Spurred by religious fanaticism, reckless political propaganda, fright, and often economic frustration, Moslems, Sikhs, and Hindus fell upon each other with knives, swords, clubs, and the torch.

The first wave of communal riots in the Punjab came early in 1947. Gigantic demonstrations by followers of the Moslem League reached strata [parts] of the Moslem population which had never before participated in politics, and the Sikh leadership decided to stop the movement by a show of force. In February, 1947, Master Tara Singh, political leader of the Sikh community, proclaimed a civil war designed to keep Moslem rule out of the eastern Punjab, and significantly added: "But why should we stop there? We would try to drive them [the Moslems] out of the Punjab entirely." The Moslems on their part took the offensive. In Lahore, commercial center of Punjab with a population of 671,000, Moslem *goondas* (thugs) began to set fire to the business houses and residences of the 300,000-strong Sikh and Hindu minority; this was for them a means of establishing the Moslem claim to the majority. "Destroy their houses," they clamored, "and with them their claims to Lahore on the basis of property." Retaliation [revenge] on the Hindu side came from a nationalistic organization called the *Rashtriya Sevak Singh,* whose whispered reasoning was, "Bomb the Moslems to death and wipe out their majority in Lahore." The Sikhs retaliated in nearby Amritsar, their holy city, and in hundreds of smaller settlements in predominantly Sikh areas. Between March 3 and June 23 (when the Punjab Assembly voted on partition), 3,200 persons were killed in the province of

Punjab and at least 100,000 Hindus and Sikhs evacuated [left] the city of Lahore which "was completely at a standstill." Refugees streamed along the roads, and in spite of strongly worded appeals from Moslem League, Congress Party, and Sikh leaders, rioting, bombing, and arson continued unabated [without lessening]. The Hindus were mostly the bomb throwers, while Moslems specialized in arson and stabbing.

The partition of the province into West (Pakistan) and East (India) Punjab did not stop the bitter communal strife. Violence on one side begot revenge on the other. Old and bloody accounts were revived and lavishly settled. . . .

Millions of human beings within this vicious cycle of attack and revenge saw one salvation only: flight. The exodus began in the spring of 1947, and by July some 250,000 Hindus had fled to India from predominantly Moslem West Punjab. Simultaneously, it was "semi-officially" confirmed in Lahore that there had been a substantial flight of Hindu capital [money and machinery] from that city since the beginning of the disturbances in the spring. Similar population movements took place out of the Pakistan North West Frontier Province. The Delhi controller of rationing announced on June 24 that approximately 75,000 refugees from all the disturbed areas had by that time reached the capital of the Delhi province.

These first waves of refugees played a sinister [evil] and often fatal [deadly] role in inflaming and spreading hatred and bloodshed between communities. "I think we can safely say that 75 per cent of what has happened in Delhi is the direct result of stories of refugees," declared Indian Premier Pandit Nehru at a news conference. . . .

Members of minority groups who had escaped slaughter or attack but feared that their turn would soon come, took to the road. Early in October, Hindus started leaving Dacca in East Bengal, a city of 213,000, where the Moslems constituted 70.8 per cent of the population. Despite assurances by the East Bengal Government, the exodus spread to almost the entire province, and by the middle of October Hindus were reported coming by train, boat, and on foot to Hindu West Bengal. A mass exodus [departure] also developed in Karachi, capital of Pakistan, with a population of 359,000—55 to 60 per cent of whom were Hindus, controlling the lion's share of the city's commercial life. Karachi had long been relatively free from communal disturbances. None the less, in October about 3,000 Hindus were reported leaving the city every day, two-thirds of them crowded on little steamers bound for Okha and Bombay. . . . By the beginning of 1948, when bloody disorders broke out between the Moslem and Hindu populations, about 100,000 Hindus had already left Karachi.

In other parts of India, minority groups had to leave under pressure of threats or were advised to go. Sikh bands in East Punjab, after having attacked Moslem villages and killed many villagers, drove other villagers away with the warning: "Go to your Pakistan! If you dare come back here, we'll kill you to the last child. . . ."

Successive waves of survivors and of "voluntary" and compulsory refugees flooded every highway, road, and cowpath linking Pakistan with India. Every means of conveyance—from airplanes to ox-carts—was used to escape annihilation [destruction] and reach safety. . . .

By and large, however, the tragic exodus was conducted in the simplest and oldest way—on foot. Like the Children of Israel, but in ten to twenty times their number, millions of Hindus, Moslems, and Sikhs began their self-evacuation over foot-paths and bullock-cart roads. Sometimes the caravans were relatively small, considering the danger they faced; sometimes they were unwieldy columns of hundreds of thousands of people. Forming what may be called the greatest single refugee trek in the world's history, 800,000 Hindus and Sikhs, coming on foot from Pakistan, were reported by the middle of October as being within twenty-five miles of the Indian border. The procession was forty-five miles long, with 400,000 in a single column and the rest in smaller groups. New Delhi newspaper correspondents reported on October 16 that the immense convoy had been attacked twice and suffered about 1,000 casualties. The exact whereabouts of the marchers was kept as a military secret to avoid further attacks. A month later, ten Moslem foot convoys [escorts], totalling 570,000, were reported moving across the Punjab toward Pakistan. In December, foot convoys, 30,000 to 40,000 strong, marched 150 miles from the rich agricultural lands of the Lyallpur and Montgomery districts of Pakistani West Punjab with thousands of head of cattle and hundreds of bullock carts carrying the migrants' meager possessions. . . .

The scope of this migration, as well as its hardships, was almost beyond imagination. Organization and protection of this two-way mass movement became the principal concern of the Indian Army. On September 15, the Army began using tanks to escort long columns of Moslem evacuees [people who were leaving] moving toward Pakistan through the Hindu and Sikh country of East Punjab. At the same time the Indian Government,

under an agreement with Pakistan, sent its own troops across the Pakistan border to protect caravans of Hindus and Sikhs leaving the West Punjab. By September 25, the Army had evacuated 400,000 Moslems to Pakistan and had 850,000 still to move, while in Pakistan 600,000 non-Moslems were marching toward the border of India. Thousands more were evacuated in both directions by train and motor transport.

The goal was to move this vast populace before famines and epidemics began and in time to harvest millions of acres of crops. The success or failure of this undertaking meant the difference between famine and adequate food for the entire country. . . .

The numerical scope of the chaotic population exchange between the two countries grew steadily and surpassed all estimates by Indian and Pakistani authoritative [accurate] sources.

At a press conference on September 13, 1947, Pandit Jawarharlal Nehru, India's Prime Minister, estimated that the exchange of minority populations between India and Pakistan would total 4 million, or about 2 million from each side. This huge figure of 4 million proved to be an underestimate. By October 9, 2,388,120 Moslems and 2,644,687 non-Moslems had already crossed the Indo-Pakistan border on foot, and there were 837,498 Moslems and 1,372,329 non-Moslems still enroute or waiting to cross. The total count of 7,272,634 did not take into account the number who might decide later to migrate from one country to the other. . . .

Foreign observers were quick to recognize the far-reaching meaning and implications of the population movements engendered by partition. As early as August 22, the Lahore correspondent of the *London Times* reported "the beginning of a vast transfer of populations." "In a few weeks' time," he cabled, "at the present rate of transfer there will not be a Moslem left on the Indian side of the frontier or a Hindu left on the Pakistan side, except perhaps for some Hindu merchants in Lahore." . . .

Both Pakistani and Indian leaders, however, were firm in their refusal to accept the exchange of population as a bitter but inevitable necessity and to implement it [carry it out] in a constructive statesmanlike way. Mohammed Ali Jinnah was the only one to foresee the unavoidable developments. In an interview with Sidney Jackobson of the London *Picture Post* in January, 1947, he expressed his conviction that only a wholesale exchange of minority populations between the future states of India and Pakistan could offer a solution to the ever-growing conflict between the communities. But Mohandas K. Gandhi, the most outstanding spiritual personality in India, was unbendingly opposed to that idea. . . . "The transfer of millions of Hindus, Sikhs and Moslems is unthinkable and wrong," he declared. A few days later, the Government of India and the Acting High Commissioner for Pakistan in New Delhi joined in efforts to halt the flow of Moslems from India's capital into refugee camps whence they would be evacuated to Pakistan. Both announced that steps were being taken to provide "adequate protection" for the Moslem minority in the twin cities of Delhi and New Delhi. A military spokesman told a news conference at Government House, residence of Governor General Viscount Mountbatten, that the government wanted to keep the Moslems in their homes. . . .

Both in East Punjab and West Punjab, the two-way Moslem and non-Moslem migration has actually effected a clearcut sorting out of the rival communities. "The scarcest thing in Lahore is a Sikh or Hindu, while in Amritsar there was not a single Moslem fez to be seen," reported *The New York Times* correspondent as early as August 21, 1947. Not more than 150 to 200 thousand Moslems have remained in the whole of East Punjab, where 5.3 million Moslems had lived in 1941. By November, 1950, a total of only 114,000 Hindus and Sikhs remained in the whole of West Pakistan, stated Pandit Nehru in the Indian Parliament. . . .

But the overwhelming majority of those who had left their blood-drenched and fire-gutted cities and villages on both sides of the India-Pakistan frontier and have in the meantime created for themselves some kind of livelihood in their [new homes] . . . are not at all willing to return. Nor are their former governments prepared to permit their [return] . . . to homes and economic positions that have been in the meantime occupied by refugees from the other side of the frontier.

A telling proof to this effect was offered as early as the spring of 1948 when, with relatively peaceful conditions restored, certain groups of Moslems who had fled to Pakistan in 1947 started trekking back to India. Nearly 52,000 Moslems had returned to India during April, May, and June of 1948. This . . . movement created a complex problem. Property hastily and informally vacated by the fleeing Moslems during the fall and winter of 1947 had been taken over by "evacuee-property custodians" for allocation [distribution] to Hindu and Sikh refugees from Pakistan; settlement with the former owners was to be made later. The return of these owners threatened to upset the new setup. The Government of India, there-

fore, promulgated [officially announced] an ordinance called "The Influx From West Pakistan (Control) Ordinance 1948" which prohibited the entry of any person into India from any place in West Pakistan, whether directly or indirectly, unless he has in his possession a special permit. The Pakistan Government, in turn, tightened its border controls and declared that permits would be required of all persons wishing to enter Pakistan from India. It was not before July, 1953, when refugees both in East and West Punjab had definitely settled down and hardly anybody was considering "undoing the transfer," that the two governments had announced that restriction on travel between India and West Pakistan will be relaxed. . . .

The gigantic movement of over 11 million people has undoubtedly been one of the most staggering problems ever to confront any government. On a technical level it involved placing troops, patrolling roads, requisitioning trucks and railroad cars, and setting up emergency camps. Once the technical phase was over, even more complex questions faced both governments—questions involving the entire economic and political structure of India and Pakistan. . . .

The first and most urgent task was to shelter and feed the incoming destitute [penniless] millions. Many have found accommodation with relatives and friends, but towards the end of December, 1947, not less than 1,250,000 refugees were still living on government dole [charity] in 160 camps all over the country. The continued existence of large numbers of able-bodied refugees in relief camps, fully dependent on doles [contributions] from the government, was a severe drain on the resources of the country. It was also leading to progressive deterioration in the refugees' morale. . . .

The Ministry of Rehabilitation has therefore decided that gratuitous [free] relief in camps must be gradually stopped, and set October 31, 1949, as the deadline. . . . Dispersing of camps took longer than it was intended, but at the end of December, 1950, only 39,000 refugees from West Pakistan—all belonging to the accepted category [group] of old, infirm [sick], and unattached women and children—remain on doles. . . .

Simultaneously, the Government undertook large-scale reclamation of virgin [not yet used] land, thus linking its Grow More Food campaign with the rehabilitation [restoring to good condition] of refugee peasants. Vast uncultivated areas were put under the tractor. As soon as tractors ploughed up the land, a specially constituted Board carefully selected and sent batches of approved refugee settlers to the colony where they were given accommodation and free rations until they were able to earn their living from land. Then they were formed into cooperative societies and allotted land.

Two-thirds of the village houses attached to evacuee lands abandoned by Moslems and allotted to the refugees were found to be damaged beyond repair, while one-fifth needed considerable repairs. Sixty per cent of the wells in these villages were found to be useless. Funds were, therefore, placed at the disposal of the allottees either to repair houses and wells or, wherever necessary, to construct new ones. Then, for tilling the soil, bullocks, seeds, and agricultural implements [tools] were needed. Also, until the first crops were ready, the allottees and their families had to be fed for periods from six to nine months in each case. For all these purposes and for other requirements of resettlement, the Government has had to advance loans, which totalled nearly sixty-five million rupees up to August, 1950. To a large extent, the assistance given to rural settlers was in kind rather than in cash. It was felt that Government agencies could handle the procurement of large quantities of implements and livestock better than the refugees themselves and also that this would ensure proper utilization of the assistance. By the end of 1950, 622,000 rural families totaling 3.1 million persons had already received allotments of land. Only 15,000 agricultural families from West Pakistan remained to be provided with land. Arrangements were made to find suitable land and make available the necessary financial means for absorbing these 15,000 families.

Difficult as has been the resettlement and integration of rural refugees, the problems of urban refugees have proved to be even more staggering. Roughly two-fifths of the total number originated from urban areas. But among those who came from rural districts and were staying in camps located near the towns, thus making their first contact with urban life, also developed "a marked pro-urban bias . . . resulting in their giving up the idea of returning to rural life," which an Indian Government publication (*Rehabilitating the Uprooted*) noted in 1951. The number of persons to be rehabilitated in the towns has been thus swelled by an estimated 500,000 and rehabilitation plans have had to be drawn up accordingly for two approximately equal blocks of refugees—rural and urban—each numbering some 2.5 million. . . .

Of great help proved to be the National Employment Service with a network of Employment Exchanges all over the country: up to December, 1951, about 199,000

urban refugees, qualified technical and professional men, had been placed in government, semi-government, or private services.

The most ambitious step which the Indian Government took in order to provide employment for urban refugees was setting up a number of new townships, some of which were started through the initiative of the refugees themselves. . . .

The task of receiving and rehabilitating the millions of Moslem refugees in Pakistan was, in more than one sense, not less formidable [hard to overcome] than that of India. The economic dislocation caused by the mass exodus of the Hindu population was tremendous. While West Punjab obtained a considerable surplus of agriculturalists, weavers, potters, shoemakers, and other artisans, it lost probably eighty per cent of its traders and ninety per cent of the sweepers, who were responsible for sanitation. In the villages the agricultural credit system disappeared with the Hindu moneylender. In the market towns it was impossible for the peasant to sell his crop because the Hindu wholesaler had left. In the cities the banks were closed because almost all the accountants and clerks had been Hindus. In the Northwest Frontier Province, the number of non-Moslems who left the province (269,000) far exceeded the number of Moslem refugees who came in (31,000), and the province suffered much more from the loss of trained and educated men than from the pressure of landless and homeless refugees. . . .

In order to prevent the disruption [breakdown] of steady business activities, the Sind Provincial Government flatly disregarded the agreement between the Governments of India and Pakistan providing that evacuees from either country should not be searched. Instead, special export regulations were enforced against Hindus leaving Karachi; they were not allowed to take with them "essential commodities"—machine parts, unsewn cloth, sewing machines, typewriters, and so on. Commodities prohibited [forbidden] for export might be disposed of by the owners. Restrictions were also placed on the panicky flight of capital from Pakistan—a flight which had grave repercussions on the money market.

Restrictive governmental measures have, however, only slightly improved the general situation. Nearly all of Pakistan's financial and professional men were among the millions of Hindus who fled to India. In return, Pakistan got 5 to 6 million impoverished Moslem peasants from India, most of whom left their agricultural implements behind. Pakistan found itself with camps full of landless farmers and an almost complete lack of skilled technicians or businessmen. The majority of workers in Pakistan's Industrial Department were non-Moslem and opted for India. Necessary equipment and machines were not obtainable and the department lost some of its best plants in East Punjab. When Moslem workers in the East Punjab cottage, hosiery, handloom, carpet, blanket, foundry, and engineering industries started to arrive in West Punjab, their settlement presented great difficulties because factories abandoned by Hindu industrialists were closed down and some of them needed heavy capital investments [investments in machinery and buildings needed to operate a factory] before they could be in working order again. There was also a shortage of building material, spare parts, pig iron, mild steel, tool steel, coke, coal, chemicals, etc., which had always been imported into West Punjab.

A major problem was protection of health of the refugees. Thousands came, suffering from more or less serious wounds. Hundreds of thousands had to starve or do with inadequate or unsuitable food during their trudge to Pakistan, so that they arrived in a state of broken health. To make matters worse, cholera broke out in the camps along the main routes of their movement into the interior, and smallpox broke out in an epidemic form during the winter months. West Punjab's Medical and Public Health Department was ill-equipped to cope with this predicament. Some seventy-five per cent of doctors and other medical personnel in pre-partition Punjab had migrated to India, and there was an acute shortage of personnel as well as of medical stores. Epidemics and the severe cold of the first winter after partition took a heavy toll of life from the refugee mass. . . .

In industry and commerce, problems of resettlement and rehabilitation were more intricate. The urban property of Hindus and Sikhs who had left was allotted to refugees temporarily, and the rents held for the absentee owners by a High Court judge who was appointed as Custodian of Refugee Property. Bank clerks and accountants were hurriedly trained in night classes. Untrained auxiliary nurses were enrolled to maintain the hospitals. The cooperatives played a . . . part in purchasing the rice and wheat crops and in starting general retail stores in the district towns. Factories abandoned by Hindus were leased out to Moslem refugee industrialists and experts; simultaneously, the services of industrialists and public volunteers were enlisted to save the factories from further damage. Dumps were created to conserve the material available, and syndicates were

entrusted with their management. Yet, despite all these efforts, of 934 factories abandoned by non-Moslems only 56 had resumed work by February, 1948. . . .

The task of rehabilitation of refugees was still ahead and the Government was largely relying on [the] private philanthropy [charity] of [the] Pakistan public. . . .

A Pakistan Government official who was commissioned to survey the refugee housing situation in the capital city of Karachi, wrote in his report: A farmer provides his one yoke of oxen with properly sheltered space covering more than 4 by 5 yards. They comfortably stand there by their manger to munch the fodder, and sit down sprawling themselves to chew the cud or sleep the restful night away. Pakistan's millions of refugees did not enjoy even this moderate amount of space or comfort. The miserable huts, or *juggies,* which they built for themselves of reeds or rusty sheets of iron, or even of old rags, were just large enough to afford one family, or an average of 4.2 persons, the same living space for 24 hours of the day as is considered normal for two water buffaloes to rest in at night. The government survey established that 119,402 families in Karachi alone had less space to themselves than is generally allowed to the beasts of burden. . . .

Inside the *juggies,* related the survey, the prospect begged description. Rags were used for bedding; one or two broken trunks and a few ugly utensils could be discerned in the half light; an improvised curtain concealed the family latrine [toilet]. Outside, in the rough, uneven lanes, according to the season, dust alternated with mud, and there were no street lights. In these appalling conditions, 108,000 children of school age were living in Karachi, a city of over two million, with little prospect of getting any education at all. Altogether, concluded the survey, over half a million human beings were crowded together in these sub-human hovels. . . .

[8]"In Europe: Where Paychecks Beckon Across Borders," *U.S. News & World Report*, Vol. 58 (Jan. 18, 1965). Reprinted from *U.S. News & World Report*. Copyright 1965, U.S. News & World Report, Inc

Document 5[8]

1. Compare the kind of migration described in this document with the kinds that were described in previous articles. In what ways are they similar? Different?
2. Compare the natural resources in northern Europe with those in southern Europe. What may the physical environment have had to do with the migrations described in this document?
3. Why are northern-European countries encouraging people to immigrate?
4. What problems are created by such a migration? What are the advantages of such a move?
5. Do you think that the immigrants have been treated fairly? Find out about the experiences of immigrants to the United States in the late nineteenth and early twentieth centuries. Compare their experiences with those of the workers described in this article. Give reasons in support of your answers.
6. Based on the evidence provided by all the documents in this exercise, what are some important reasons for migration?

Europe is caught up in a mass migration the like of which it has never experienced before.

People by the millions are and have been on the move—voluntarily—out of southern Europe to the booming industrial countries to the north.

The attraction: plenty of jobs at good wages.

Germany now has 1 million foreign workers—Spaniards, Turks, Greeks, Italians, Yugoslavs—and thousands more are coming every month from as far away as Korea, Morocco and Egypt.

French industries and farms now employ well over a million foreigners. In Switzerland, one out of every three workers is from another country. British industries are heavily dependent on upward of 1.5 million foreign laborers.

Labor Shuffle. This mass migration, growing apace, is turning Europe into a melting pot. Populations are changing, national barriers are tumbling.

Beckoning job opportunities have put an end to old attitudes. European workers, displaying new mobility, are making a "U.S. of Europe" something of a reality, while politicians still debate it.

Basic force behind the mass migration is Europe's continuing boom.

A strong rise in business year after year has created more job openings than workers to fill them.

Germany, for example, had 700,000 jobs going begging at latest count. Switzerland reports 196 unemployed in a country with 6 million people.

To fill vacant jobs, the booming countries have had to recruit workers in other lands. It has not mattered that most of these workers are lacking in education, skills and training—or even that they have no knowledge of the importing country's language.

Says one German economist: "Maybe there is a lesson for the U.S. in what is happening here.

"In America you say you cannot find jobs for people because they are unskilled and poorly trained—your teenagers and older workers. But in Europe, where business is expanding at a faster rate than in the U.S., we have plenty of work for everybody."

Europe's "great migration" is spreading its benefits far and wide.

Without foreign workers, the booms in West Germany and Switzerland would be crippled. France would

be hard hit. Britain, too, would be in trouble in key industries.

Foreign workers enjoy steady jobs at equal pay and with fringe benefits, such as social security.

These workers are sending home a major part of their earnings, many of them building up savings to start small businesses when they return to their native lands. Skills to run a business or ply a trade, in turn, are being learned on the job in the foreign country.

Problems, Too. But note this: The worker migration has not been entirely serene. Problems have followed in its wake in several countries.

Racial clashes have flared in Britain as a result of the arrival of colored workers from the West Indies and Pakistan.

In Switzerland, there is a protest against the "Italian invasion." Swiss fear their country will gradually lose its cultural and political traditions under the growing influence of foreigners.

Germans, Swiss and Frenchmen in many places are protesting—often with their fists—over the competition for girls created by [the arrival of] amorous [romantic] Italian immigrants.

In other cases, there are grumbles about foreign workers' competing for the better jobs, housing, school accommodations and hospital services.

Says one irate Swiss: "I am angry at the foreign cuckoos who lay eggs in nests built by others."

For the latest on Europe's mass migration, and how it's working out, here are reports from key countries by members of the International Staff of "U.S. News & World Report":

BONN. Foreign workers, for the most part, are welcomed into West Germany.

Labor experts predict that 500,000 such workers will be added to the million already in Germany.

Increasingly, these foreign workers are bringing their families, as well.

The influx of alien labor has gone quite smoothly. Some newspapers give big play to crime stories in which foreign workers are involved, but investigations have shown that the crime rate among imported workers is actually below that of the German population.

No Discrimination. Foreign laborers come in as equals. They are entitled to the same benefits and are subject to the same tax rules as Germans.

There is no "closed shop" [in which all workers in a particular factory must belong to a labor union] in West Germany, so foreign workers are not under pressure to become union members.

German Government, business and union officials have all taken steps to provide special facilities for the foreigners. Numerous foreign-language radio programs are now broadcast.

Government money has gone toward erection [building] of "leisure homes" for imported workers. There are now close to 300 of these, most with TV's and radios, and featuring foreign films. A traveling mosque has been made available for Turkish rail workers who are Moslems.

Foreign workers in Germany occupy mainly unskilled or semiskilled jobs.

Biggest employers of foreign labor are firms in the metal industries, including autos. Other types of manufacturing, construction and mining supply most of the remaining jobs.

Turks Are Favorites. German employers agree that Turks are the best foreign workers. Next, in order of preference: Spaniards, Greeks and Yugoslavs. Italians are criticized by employers for being "job hoppers."

GENEVA. Foreign workers are considered vital to Switzerland's growth and prosperity.

Despite a heavy influx of these workers, there are still shortages of labor which hamper the country's expansion.

To lure even more foreigners, the Swiss Government now is working out a new immigration policy. This will permit foreign workers to bring in their families after only 18 months' work in the country—half as long a wait as is now required.

Swiss Outnumbered. Foreigners actually outnumber Swiss workers in some industries. Textile factories in some places report that foreigners make up 80 percent of the work force. More than 60 per cent of all workers in the building trades are foreigners. About half of all workers in the hotel and restaurant business are imported.

These workers get paid the same as Swiss workers. Unskilled jobs now pay $40 to $45 a week. Skilled workers earn 25 to 35 per cent more.

Housing, school and hospital facilities have failed to keep up with the heavy inflow of foreign labor. Many Italians and Spaniards are forced to live in barracks or crowded apartments.

Surveys show that most of the imported workers do not want to stay in Switzerland forever. The great ma-

jority dream of saving enough to buy a car or a house, or to start a repair shop or laundry back home.

MADRID. Tour through Spain and Portugal, and you can see the effects of the emigration of workers.

Ask a woman in a back-country village of Spanish Andalusia where all the men are, and she answers:

"They are all gone. Some are in the factories of Barcelona. Many have left for Germany, Belgium, Switzerland.

"The times now are worse than in the war, so many men are gone. But at least they are not dead, and they send money."

Millions in Remittances. In all, Spaniards working abroad send home 100 million dollars a year—twice as much as Spain earns from citrus exports.

An industrialist from Bilbao sees another important gain: "The migration is fine. We couldn't possibly train men as fast or as thoroughly as they are getting trained in the North."

In a mountain hamlet of Southern Portugal, a peasant loading straw on a burro's back said of his sons:

"Two are away in Europe in German and Swiss factories. One is in Lisbon working on the steel bridge across the Tagus River. [The bridge was completed in 1966.] The fourth has a job down the road in the cork-baling factory. Soon he will be going away. I am sad for their going, but I am happy for what they are learning. I hope that one or two may come back, but not to stay. There is no future for all of them here."

PARIS. France took in 145,000 foreign workers in 1964—about 30 per cent more than in the previous year. And there's no end in sight.

French planners see a need for 350,000 more foreign workers over the next five years.

In many cases, foreigners take jobs that Frenchmen no longer like to do. Thus, Spanish and Portuguese girls are replacing French household help. More than one third of all foreign labor is employed in construction. A fourth is in metal-working industries.

Pay is the same as for Frenchmen. So are Government benefits, such as family allowances, if the worker's family is in France.

Take Giovanni Pozzi, a 41-year-old bricklayer from Italy. He has a wife and five children. He earns $160 a month, and he gets an added $120 a month as a family-allowance plan.

Mr. Pozzi pays $15 a month rent for a tiny apartment with gas, electricity, heat and running water.

The Pozzi family has hopes of moving into roomier quarters.

Frenchmen are aloof, though not unfriendly, toward foreigners. Says one official: "It's not a paradise here for them, but it's usually an improvement over what's been left behind."

LONDON. Problems have sprung up in the wake of Britain's imports of several hundred thousand workers a year.

The big reason: More than half of the country's foreign labor force consists of colored workers from Commonwealth countries—mainly India, Pakistan and the West Indies.

Britain's colored population 10 years ago numbered only 80,000. Now it's 10 times as large.

These people by necessity and partly by choice have crowded into rundown neighborhoods of the industrial cities. They have encountered violent prejudice among landlords in better-class white neighborhoods.

Pakistani and Indian immigrants have resisted assimilation [becoming a part of the dominant culture in the country]. They have organized native communities where they speak their native languages and observe native customs.

Restricted Entries. With racial tensions on the rise, the Conservative Government in 1962 ended the unrestricted entry of workers from Commonwealth nations. The Labor Party now in power has continued that policy.

Controls are applied, too, to imports of workers from Mediterranean countries. An employer must demonstrate that he is unable to recruit suitable Britons before he can bring in a foreigner from outside the Commonwealth or Ireland. About 55,000 workers a year enter Britain on this basis.

Workers from Commonwealth countries often get jobs on the London subway, where Britons are loath [reluctant] to work. They also do heavy work in steel mills or around kilns in brick works.

British unions, for the most part, adopt a negative attitude toward foreign workers, especially colored immigrants.

ROME. Nearly 2.5 million Italians have left their country for jobs elsewhere in Europe.

The breakdown: a million plus going to France, about half a million to Switzerland, 400,000 to Germany, 208,000 to Belgium, 148,000 to England, 20,000 to Luxembourg and 14,000 to Holland.

Foreign job openings have proved a blessing for Italy's South, a land plagued by heavy unemployment and poverty for many years.

"No Workers Left." Says a rural priest in Southern Italy: "There are no workers left in my parish save the village idiot, the women, the children under 15 and the very old men.

"The younger men all have jobs in the North or abroad. Money comes back for us—more money than the village has ever seen. But before this is over whole families will be gone from the village for good.

"No, it's not bad. It's good. Life in the South is hard and cruel."

Earnings of Italians in other countries sent home every month give an important lift to Italy's balance of payments and reserves.

In the year just ended, for example, remittances from Italian workers abroad—not counting those who have permanently settled overseas—exceeded 337 million dollars. That's as much as Italy earns from such a major export as autos.

And so it goes, one of Europe's greatest migrations in full swing.

Booming business and prosperity are achieving what Government exhortations [urgings] had failed for years to accomplish: a mobile work force.

Europe's provincial, restrictive [narrow, limiting] ideas toward people, jobs, traditions have fallen, hammered into new shapes by an army of immigrants.

Europe, say the experts, will never be the same again.

EXERCISE 5

Man and His Environment: *Expressing Values*

Cyprus is an island in the northeastern part of the Mediterranean Sea. Its people consider themselves Greeks or Turks, not Cypriots. About four-fifths of the population is of Greek descent—approximately one-fifth, of Turkish descent. This division is reflected in the religious, social, and political life of the island; on more than one occasion it has led to civil war. In Exercise 5 you will discover some reasons for the conflict and what its effects have been on the way people live. Using the information provided in this exercise, you are to try to find a way of ending the long-standing conflict between the two groups.

DOCUMENT[9]

Ideas to Consider

As you examine this document, consider the following questions:

1. Explain the conflict described in this document.
2. What seems to have caused this conflict?
3. How intense is the conflict? Explain your answer.
4. What ways of resolving the conflict are suggested in the document? Will they work? Why or why not? Can you think of other solutions to the problems raised by this long-standing conflict?

[9] "Crisis Background" and "Out of the Past: Cyprus on the Brink," *Newsweek*, Vol. 70 (Dec. 4, 1967). Copyright Newsweek, Inc., Dec., 1967. Reprinted by permission of Newsweek, Inc.

Crisis Background

The seeds of the latest Cyprus crisis were sown four centuries ago, when Ottoman Turkey conquered the predominantly Greek island. With the decline of the Ottoman Empire, the Greek Cypriots began clamoring for *enosis*, i.e., union with Greece, but in 1878 Turkey chose instead to hand the island over to Britain. Finally, in

1960, after a bloody revolt led by Greek Gen. George Grivas, Cyprus was granted independence.

The 1960 constitution, jointly written by Britain, Greece and Turkey, gave the Turkish Cypriots, who made up only 20 per cent of the island's 600,000 population, virtual [in effect] veto power [power to forbid] over all legislation. In 1963, to "rebalance" this situation, the island's Greek-born President, Archbishop Makarios, effectively tore up the constitution and turned Grivas and his "national guardsmen" loose on the Turkish Cypriots. The resulting civil war was brought under control only after 4,000 U.N. troops were rushed in to separate the two sides.

Under the shaky U.N. truce, Greece has illegally beefed up the 950-man military force it is permitted by treaty to keep in Cyprus by more than 10,000 troops. Similarly, Ankara has infiltrated [sent] hundreds of Turkish regulars to lend support to the Turkish Cypriots' demand for partition of the island into Greek and Turkish cantons. Meantime, ambitious President Makarios, while publicly supporting enosis, has privately tried to cut Cyprus's ties with both Turkey and Greece to maintain himself in power.

This, however, has led to tension between Makarios and Grivas, who favors "instant" enosis. That tension came to a head in September when the new military junta [group that took over the government] in Greece opened talks with Ankara in an effort to find a compromise settlement of the Cyprus problem. Hoping to force the enosis issue by precipitating [causing] a showdown, Grivas pressured the Makarios government into permitting Greek Cypriot police to institute [set up] patrols in Turkish Cypriot villages. And with that Cyprus boiled over again.

Out of the Past: Cyprus on the Brink

Once again the war drums throbbed in the Middle East. This time, however, the threats of death and destruction came not from Cairo, Damascus and Jerusalem but from Ankara and Athens. For the prospective battlefield was the troubled isle of Cyprus where Turks and Greece braced themselves for a conflict that could rend the NATO alliance.

This latest in the interminable [unending] series of Cyprus crises began with a deliberate decision by the Greek Cypriots to overturn the fragile status quo [delicate existing condition] that has governed their relations with the island's *de facto* Turkish enclaves. For two years past, the government of Cypriot President Archbishop Makarios has brought relentless economic pressure to bear on the self-administered Turkish communities. Only limited quantities of gasoline and building materials have been allowed the Turks, and Turkish Cypriots have been free to move outside their own communities only if willing to submit to search by Greek Cypriot police.

Nonetheless, a kind of standoff prevailed until mid-November when the Greek Cypriot armed forces, led by Gen. George Grivas, the hero of the Cypriot revolt against Britain, announced that they planned to resume patrols through the Turkish sector of Ayios Theodoros—a mixed village on the eastern tip of Cyprus. No Greek patrols had passed through the town's Turkish quarter since a shooting incident there four months earlier. And now, although they allowed the first patrol to pass without resistance, local Turkish leaders warned that they would not suffer another one.

Blockade: Undaunted, the 69-year-old Grivas, who was put in command in Cyprus not by Makarios but by the Athens government, proceeded to Ayios Theodoros personally and ordered the Turks not to resist. But next day, when a second Greek Cypriot patrol approached the village, it found its way blocked by a stalled tractor. And when the Greeks sought to remove it, the local Turks opened fire.

The Greek response was swift—and obviously well-prepared. A detachment of British troops, the U.N. peacekeeping force in the area, was forcibly disarmed. Then Greek positions in the hills overlooking Ayios Theodoros began to pour artillery fire onto the village. Soon, mortar, bazooka and cannon fire from both sides engulfed both Ayios Theodoros and the neighboring all-Turkish village of Kophinou. When the battle ended eight hours later, 24 Turkish Cypriots and two Greek Cypriots lay dead. And the Greeks had overrun the Turkish positions, capturing 250 of their defenders.

The incident triggered a wave of panic among the island's 120,000 Turks. Outnumbered four to one by Greek Cypriots, the Turkish minority has clung tenaciously [held fast] to its demands for formal partition of the island into Greek and Turkish cantons [sections]. And since the end of the civil war that racked the island in 1964–65, the Turks have steadfastly refused to come out from behind the weed-covered sandbags and rusting barbed-wire barricades that hedge their scattered villages and urban enclaves. "The Greeks," explained a Turkish Cypriot leader in Nicosia recently, "are like a hunter who has chased the rabbit into a bush; they are

standing there with their fingers on the triggers waiting for us to come out."

Turkish Pledge: Now, however, the hunter was apparently no longer content to wait; he was coming in shooting. And in their desperation, the Turkish Cypriots could expect help from only one source—the Government of Turkey which is pledged to protect their rights.

That help was quickly forthcoming. Summoned into emergency session, Turkey's Parliament authorized the government of Premier Suleyman Demirel to go to war with Greece itself if necessary should the Cyprus situation deteriorate [break down] further. Then, while Turkey's armed forces ostentatiously [with much display] mobilized, the Greek ambassador to Ankara was called in and presented with a blistering note containing five . . . demands.

Reportedly, Ankara's demands included (1) the immediate recall [removal] from Cyprus of General Grivas; (2) withdrawal from the island of an estimated 10,000 Greek regulars clandestinely [secretly] serving under his command; (3) compensation for the villagers of Ayios Theodoros; (4) a relaxation [easing] of the restrictions on Turkish Cypriots; and (5) effective guarantees against any further assaults [attacks] on Turkish Cypriot communities. And to emphasize that this was not idle talk, squadrons of Turkish F-100 fighter-bombers began making passes over Cyprus—a clear reminder to Greeks and Greek Cypriots alike that the Turkish Air Force, with bases only ten minutes away, was in a position to dominate the air over the island.

To the military junta that now rules Greece, all this was visibly distressing. For one thing, Turkey's armed forces outnumber those of Greece by two to one and are more heavily equipped to boot. For another, the junta clearly felt that it had enough problems without taking on a basically senseless war.

Accordingly, the junta quickly ordered Grivas home and retired him to his shabby, red-tiled villa in Athens. "Our sole objective," declared junta member Brig. Stylianos Pattakos, "is to avoid complicating the situation further." Then in another attempt to stave off [avoid] disaster, the Greek rulers appointed career diplomat Panayotis Pipinelis to fill the vacant post of Foreign Minister.

Moderate: A member of several former Greek governments, the 68-year-old Pipinelis has long been a moderate on the question of Cyprus. But, despite his moderation, neither he nor the junta was prepared to bow completely to the Turkish ultimatum [order]. Instead, they suggested that the two nations open talks to deescalate [ease] the Cyprus crisis.

But Ankara, sensing give in the Greek position, seemed determined to get a Cyprus settlement to its liking. Amid war fever that brought hundreds of thousands of Turks into the streets screaming for invasion of Cyprus, Turkey reiterated [repeated] its demands. And in response Athens stepped up its own military mobilization. . . .

[Note: In late December, 1967, both Turkish and Greek national forces were withdrawn from Cyprus, leaving the country in the charge of President Makarios. Makarios was allowed to retain the Cyprus National Guard as a defense force. In addition, a small United Nations peace-keeping force was left on the island to watch over the situation and to try to keep the peace between Greeks and Turks. There have been small incidents of hostility since—and the conflict continues.]

MAP[10]

Ideas to Consider

Examine the map of population distribution which follows. It indicates where three major ethnic (national) and religious groups live: Greeks (almost all of whom belong to the Greek Orthodox Church), Turks (who are mostly Moslems), and Maronites (who belong to an eastern branch of the Roman Catholic church). The Maronites generally live together with the Greeks; both are Christian groups. The map also shows how the principal cities, including the capital of Nicosia, are divided among the various groups. As you study the map, try to decide: Which areas are predominantly Turkish? Are any of the cities predominantly Greek or Turkish?

It has been suggested that one way of resolving the conflict between the Turks and Greeks of Cyprus would be to partition, or divide, the island between the two groups.

What would be a workable way of dividing the island between the two groups? Remember that your plan must be acceptable to all groups. It must also be economically workable—that is, your plan should not

[10] "Geographical Distribution of National Groups, Cyprus," from the *Geographical Review*, July, 1956. Courtesy of the American Geographical Society.

leave a group with no access to natural resources, water, or good land.

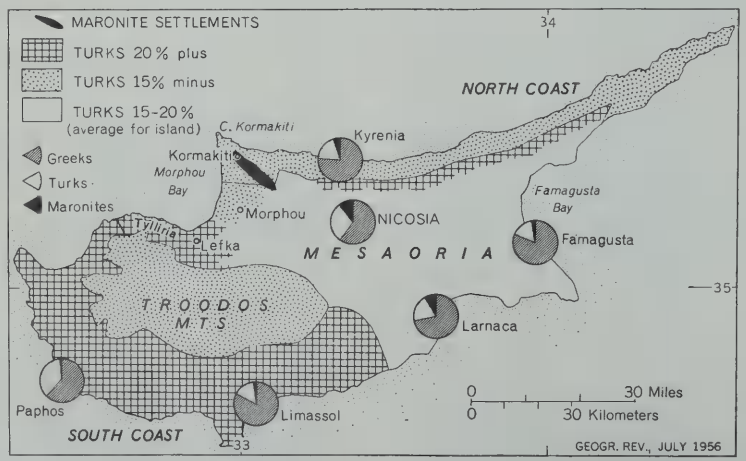
The maps of Cyprus in Exercise 2 as well as the map of population distribution which follows will be helpful in devising such a plan. Be sure to consider important cities, the capital, the mountainous region, and fertile regions when you determine boundary lines. You may wish to consult other books, maps, and tables. For example, it may be helpful to find out the difference between highland and lowland temperatures.

Indicate your proposal on an outline map of Cyprus. You should also prepare a written defense of your plan. After you have finished, answer these questions:

1. Does your plan take into account the political and economic background of Cyprus? Do these factors complicate the attempt to work out a fair solution to the problem? Explain.

2. Other countries—such as Palestine, India, Canada, and the United States—have experienced problems caused by intense conflict between two groups. How have these countries resolved their problems? Has partition been successfully used? In what ways have the problems in these countries been similar to those in Cyprus? Different?

3. Would partitioning Cyprus create more problems than it would solve? Is partition an acceptable solution to the problem? Why or why not?



EXERCISE 6

Man and His Environment: *Test Questions*

(Test questions will be provided by the teacher.)

EXERCISE 7

Man and His Environment: *For Further Inquiry*

FINAL QUESTIONS

1. Does man's environment determine his economic development?
2. What limits, if any, are placed on man by his natural environment?
3. In what ways has natural environment been an important factor in history? Give examples.
4. What factors are important in influencing where people choose to settle? Why are some areas more popular than others?
5. Do all parts of the world have an equal share of wealth? To what extent has environment affected wealth?
6. In what ways has the physical environment influenced the way in which you live?
7. How has the natural environment influenced the development of the city or town in which you live?
8. How have climate, landform, vegetation, and natural resources influenced the development of the United States?
9. Should countries with greater wealth help those that have less? Or should each nation take care of its own affairs? Explain.
10. How has a society's culture and technology influenced its choice of a location?

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DEC 03'84
NOV 28 RETURN

EDUC MAR 09'85
MAR 08 RETURN

EDUC NOV 30'95
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